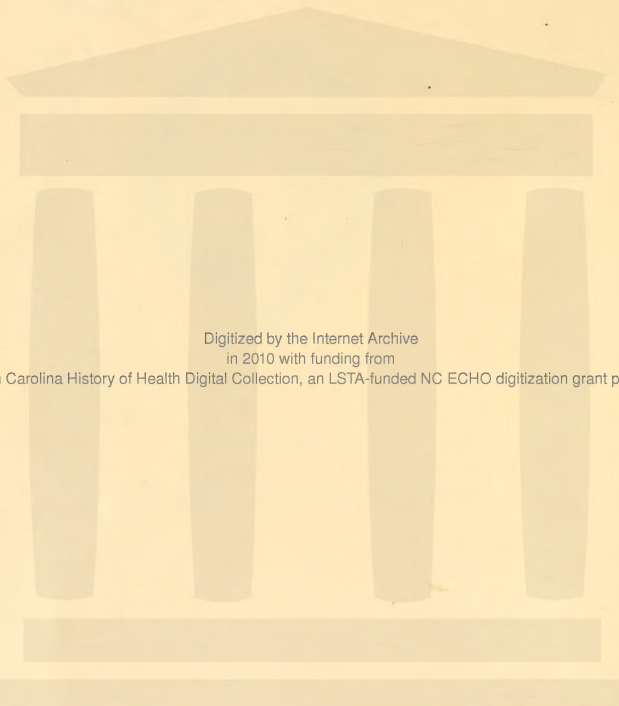






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The Charlotte Medical Journal.

A MONTHLY JOURNAL OF MEDICINE AND SURGERY.

EDITED BY E. C. REGISTER, M. D., AND J. C. MONTGOMERY, M. D.

CHARLOTTE, N. C.

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The Charlotte Medical Journal.

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No. 1.

Endometritis.*

By Dr. W. P. Whittington, Asheville, N. C.

Endometritis or inflammation of the lining membrane of the uterus, is either confined to the cervix, or body, or may involve the entire endometrium, and may be acute or chronic.

Endometritis is either catarrhal, traumatic, gonorrheal, or septic.

The catarrhal may be caused by exposure to cold and damp, at unfavorable times. The traumatic by the introduction of instruments, digital examinations, or excessive venery. The gonorrheal, and septic, by infection with special disease germs making their way through the vagina, or originating in the uterus as in the puerperal form.

Acute endometritis is very much more common than many authors think; but is not met with because in many cases the symptoms are so mild that the physician is not consulted until the disease assumes the chronic form, and the symptoms become more aggravating and continual. In the simple catarrhal and milder traumatic cases, we have slight pelvic tenesmus, backache, with a sensation of fullness or aching in the pelvis, which is followed later by a mucous or catarrhal discharge which may not be sufficient to especially annoy the patient.

If the inflammation is due to gonorrhea, puerperal or other sepsis, the symptoms are very much more severe, and the physician is apt to be called. Whatever the cause may be the symptoms are more or less severe as the inflammation involves the cervix, the body, or both. There is usually more or less menstrual derangement, in which the flow may appear too early, be deferred, or be too scant, or too free; the only regularity being its irregularity.

There is more pain during the period than in the normal condition, often keeping the patient in bed for several days. On physical examination the uterus will be found slightly enlarged, tender on manipulation, and to the eye the cervix will be red florid, or almost purple, according to the severity

of the congestion and inflammation. Later there is a discharge passing down through the os which is of a mucous character and is usually marked but not very abundant.

The treatment of acute endometritis requires rest in the recumbent position, copious hot douches two or three times a day, hot applications over the hypogastrium, either by means of hot cloths or poultices. The bowels should be kept well open by salines, and bromides and opiates should be given to relieve pain and nervousness. I think we seldom recognize acute gonorrheal endometritis, because the vulvo-vaginal symptoms usually absorb all of our attention and if the endometrium is involved, it is not observed until it assumes the chronic form. The same remarks are applicable to puerperal or other septic forms. If acute endometritis is neglected, or treatment fails to cure, the disease naturally becomes chronic.

In the consideration of chronic endometritis we do not propose to enter into an extended discussion of the anatomy and pathology, but wish to deal briefly with conditions as they appear from actual experience. We know by observation that the endometrium becomes inflamed, advances to the stage of congestion, hyper-secretion, and in long continued cases changes in the mucous glands, epithelium, and cellular tissues may take place; but suppuration and ulceration as a rule do not occur.

The fact that we may have chronic inflammation of either the cervical, or corporeal endometrium independent of the other, is probably due to the anatomical construction, both of the endometrium and uterus itself. The anatomical, and especially the functional structure of the cervical and corporeal endometrium, is so different as to render them susceptible of very different conditions, independent of each other.

In chronic cervical endometritis which has continued for considerable time, and involves the entire cervical membrane, the patient suffers with general debility, especially of the nervous system. She is easily fatigued, changed in disposition, and less inclined to mental activity. There is often considerable mental disturbance, which is probably, in part at least, due to a profuse annoying leucorrhea which leads her to suppose that she has a serious affection.

*Read before the Buncombe County Medical Society, October 16, 1899.

The character of the leucorrhœal discharge is diagnostic. It is dense, thick, opaque, and tenacious. In cases of long standing, there is often backache in the sacral region, accompanied by pelvic tenesmus, which symptoms are usually aggravated by muscular exertion.

On digital examination we often find a roughened condition around the os, and can recognize a thickened and everted condition of the cervix at the os, which is sometimes, but not always, tender to the touch. On speculum examination we find the mucous membrane of the cervix red with erosions extending outward into the vaginal surface with more or less eversion of the os externum. This inflamed cervical membrane bleeds easily on touch with the sound, and is more sensitive than the normal membrane. There is a free discharge of tough mucous hanging in the external os, which is very difficult to remove.

In the treatment of all forms of chronic endometritis every thing possible should be done to improve the general health, build up the patient, regulate the menses, and establish equilibrium of the nervous system. While these things are of great importance they will seldom, if ever, effect a cure by themselves, for which we must rely on the application of local treatment along with general constitutional methods. A great many drugs, some of them in highly caustic strength have been used as applications to the diseased mucous membrane, with some degree of success, but have often done great harm by substituting an unhealthy cicatricial tissue for the inflamed endometrium. I prefer the use of a solution of nitrate of silver, varying in strength from two to twenty grains to the ounce, or a solution of one of carbolic acid to two of tr. iodine. The tough mucous should be removed from the cervix with a suction syringe or small curette, and the application made with a small piece of cotton on an applicator. A tampon of cotton or wool, saturated with tannate of glycerine, should be applied, which should remain twenty-four or forty-eight hours. At the end of which time the tampon should be removed and the vagina flushed with an abundance of hot water, following with a solution of boracic acid one teaspoonful to the quart. This should be kept up once or twice a day between the treatments, which should be repeated every four to eight days.

In chronic corporeal endometritis are many of the same symptoms as in the cervical form, only of an aggravated form. The nervous system and digestive organs are very much deranged, resembling somewhat those which occur in gestation. These

symptoms are, doubtless, due to reflex nervous derangements. There is often constipation, headache, sleeplessness, and pains in the spinal cord. In chronic corporeal endometritis the menses are almost always deranged, while in chronic cervical endometritis it is not necessarily so. For the most part in chronic corporeal endometritis the menstrual discharge is profuse and prolonged, and accompanied with severe pain. In this form of the disease the backache is more severe. There is pain in the uterus, marked pelvic tenesmus with vesical and rectal irritation. The leucorrhœal discharge is more profuse, less tenacious, and may contain blood and puss corpuscles.

Physical examination reveals a somewhat enlarged uterus, tender on bimanual manipulation, and by touch with the probe. The internal as well as external os is dilated, and the mucous membrane bleeds easily.

In the treatment of chronic corporeal endometritis, especial attention must be given to building up the general health. The patient should be put in the very best possible constitutional condition. If gonococci are found in the discharge, the patient should be saturated with santal oil, balsam copaiba and cubebs. If there are extensive fungus growths they should be removed with the curette. Many remedies have been recommended, as the strong caustics, iodoform, etc. Of all the medical applications, I prefer again the moderately strong solution of nitrate of silver, or the carbolic acid and iodine compound. These should be applied directly to the membrane by means of a long glass pipet, leaving five to fifteen minims in the cavity of the uterus as the pipet is slowly withdrawn.

These applications should not be made oftener than once a week, and should be followed by the tannate of glycerine tampon, and rest in bed for at least twelve hours. After the tampon is removed the copious hot water injections should be used as in the cervical form. Where there are not extensive fungus growths, I prefer, to all other treatments, the application of electricity directly to the endometrium by means of a carbonized steel or platinum electrode. This should be passed well up to the fundus, and a large clay pad (eight by ten inches) on the abdomen. These applications should be made once in four days, and for four to ten minutes at a sitting; using fifteen to fifty milliamperes strength.

Some physicians recommend a much stronger current, but I have not found it necessary. Six to ten treatments are usually sufficient to produce a cure, unless in very obstinate cases. If there is scanty menstrual flow, or amenorrhea, the nega-

tive pole should be used in the uterus. If the flow is frequent or profuse the positive pole should be used.

I wish further to say that we will sometimes meet with cases of septic endometritis where the uterine tissue is so much involved that it is impossible to produce a cure, and it may in such cases become necessary to resort to hysterectomy.

In carrying out the modes of treatment above suggested the greatest regard should be had to asepsis, or we may have the very undesirable conditions of septic cellulitis or peritonitis to deal with. If we carry out these methods aseptically and faithfully we will have the satisfaction of seeing many suffering women restored to health and happiness.

25 Vance St.

DISCUSSION.

DR. J. A. WATSON.—I hardly know where to begin on the doctor's paper, but I might just as well begin at electricity. He has not made very clear to my mind the different forms of endometritis, and its treatment; that is, he has classified them according to anatomical structures, but not according to the origin of the disease. For instance, if we have a specific form, due to gonorrheal affection, I cannot see that the doctor's treatment quite covers the ground. In a case of specific endometritis I should advise that the vagina and uterus be thoroughly cleansed, and then proceed with treatment with the curette, scraping out everything, and making the conditions as aseptic as possible. I think we have methods that are very much more surgical than electricity for the cure of septic endometritis. I think in such cases the curette should be used and the uterine cavity emptied and a mild cauterizing solution used. In reference to the catarrhal form, I should look to the cause of it, and treat it according to whatever that may be.

DR. J. A. REAGAN.—I did not intend to say anything on that paper. There are some good points in it, and the treatment in some cases is good. My experience with this disease is that owing to the idiosyncracies of the patients and their nervousness different treatments are required for different persons. I have tried some treatments that were perfectly successful in one case and in others were not. Instead of the curette I have used the spray in some cases by making a proper solution of nitrate of silver, and I have used also a preparation with a little carbolic acid in it, and have used the hydrastis canadensis. I have a good deal of confidence in hydrastis canadensis in all mucous membrane diseases,

and have succeeded with that in cases where other things have failed. I do not think there is enough stress put upon the value of that medicine by the profession generally. Its application has a very happy effect upon sore throat, and almost every mucous membrane that is affected. I think upon the whole the doctor's paper is a very good one, but I believe we have to change the treatment in some cases, and that no one regular treatment will answer the purpose. There is no specific, I consider, in the cure of the disease.

DR. M. H. FLETCHER.—I have seen two cases treated by electricity. If a man has the time to use it and knows how it is a rational treatment. As I have often said, electricity is a thing we have all neglected. As to what Dr. Reagan says of hydrastis, the principal objection to its use is on account of its staining qualities. We have other remedies about as good without this drawback.

DR. J. A. WATSON.—I cannot see how you would treat endometritis where for instance the puerperal decidua has become affected and the uterine cavity contained some debris and the remains of the placenta possibly, or some of the membrane. How are you going into a case like that and treat it with electricity. You may decompose the tissues possibly. I do not know much about electricity, but I do not see how that could possibly compare with the curette, which would remove the source of the infection, and would enable you to get into the tissues and expose healthy tissues where you could apply your antiseptics. I think there is a unanimity of opinion as to the use of the curette in this disease. You may use milder remedies, you may wash out the uterus with antiseptic washes, but you are not getting down far enough to reach the real source of trouble. I admit that in my ignorance of electricity there may be something in it, but I do not believe it is near so surgical as the curette.

DR. C. L. MINOR.—I may have misunderstood Dr. Whittington, but if I did not I think Dr. Watson misunderstood him, but I do not believe he advocated electricity in septic endometritis. Dr. Watson in speaking of gonorrheal endometritis said he would interfere and go after the gonococci with his curette. The formation of the mucous membrane, with very long lines with gonococci running between the fibres of the uterus for long distances, makes it almost impossible to curette out the gonococci. It is true you cure a good deal, but its excessive obstinacy in yielding to any treatment will prove I am right.

DR. W. P. WHITTINGTON.—I thank you

very much for the discussion and mild criticism and will now submit my apology, which I did not submit in the beginning. I have prepared this paper very hurriedly, and have not had time to re-arrange it, or I would not have submitted it to the Society in this form. I want you to understand further that my discussion is mainly confined to simple catarrhal or traumatic endometritis. I referred to specific and septic endometritis, but also referred them to separate treatments, to be used for those conditions. I will give my opinion as to the treatment of septic and gonorrheal endometritis. I do not think curetting is worth a cent. I think it is time lost and torture to the patient. I am becoming convinced that gonorrhea is curable. The specifics of gonorrhea are balsam, sandal oil and cubebs. We do not need any applications in gonorrhea in any form, shape or substance, but that every case must be cured by constitutional treatment. I would use vaginal douches as a palliative, but should not allow them to take the place of specific treatment. So far as a septic form is concerned, I think the curette will not reach all of those forms. Where it is confined to endometritis I believe electricity will reach it. I think we understand too little about electricity. In the use of electricity we not only have the local application of an instrument, but we have something that produces a caustic action. We do know that electricity will destroy a wart or a mole or a large substance on the outside of the body. Then why not destroy fungus growth in the endometrium, although I think there are some cases where the curette would answer the purpose just as well. I have had one severe case of endometritis following the application of electricity, but I think the conduct of the patient explained that. The patient came to my office and took treatment and went out shopping for two or three hours on a cold, drizzly day, when I had told her positively to go home and go to bed taking hot applications and hot douche. So far as the dangers of electricity are concerned, when compared to the curette, I must insist that the use of electricity is much less dangerous. I have heard of one case at least in this city where the walls of the uterus were broken down and the patient lost her life from curetting the uterus; I never have seen a death produced from electricity in the uterus. I hope you will remember that I did not advocate the remedies mentioned to the exclusion of all other remedies, but simply recommend them as producing the best results in my hands.

Headaches: Does the Physician Place Sufficient Importance Upon Eye Strain as a Cause?

By Herman H. Brown, M.D., Chicago; Professor of Didactic and Clinical Ophthalmology, Illinois Medical College.

In selecting this subject I am mindful of the fact that it is one worn almost threadbare, and yet I am constantly impressed with its great importance, and I feel confident that there yet remains ample reason for consideration, more in detail, of a few important points bearing upon it. I would venture the assertion, that my daily experience differs not from that of other ophthalmologists in this respect. In the discussion of this subject I do not wish to be understood to claim that all headaches are the result of eye strain, but I do claim that many headaches which are the result of eye strain are not recognized as such, but the cause is ascribed to real or supposed conditions existing in other parts of the body, which in reality play but slight, if any, part as a factor in their real production. I am fully aware of that fruitful cause of headaches found in gastro-intestinal disturbance; likewise those due to faulty excretions, as well as those resultant upon disturbance of the general nervous system from numerous other causes. Granting to these their respective importance, I claim that, consistent with the delicate mechanism of the eye, no considerable degree of strain can continue without more or less nervous disturbance, and this, manifesting itself frequently in a more or less severe form—of "headache." Therefore the subject of this paper suggests itself to me: "Does the Physician Place Sufficient Importance upon Eye Strain as a Cause of Headache?"

My work brings me daily in contact with the physician, and it is this fact largely which convinces me that he does not attribute to the eye its proper share in the production of nervous disturbances. I do not ascribe to the physician ignorance of the anatomy and physiology of the eye, for these he knows as well as the ophthalmologist does that of the ovary or stomach, but in his eager search for the disturbing element he is quite apt to feel content in his belief that the cause lies, perchance in the stomach. Or the gynecologist finds ample reason to suspect the headaches to come from reflex irritation due to uterine trouble, and the neurologist finds cause for the disturbance deep down in the mysteries of his chosen field, and I concede to each of these their importance. But I ask, then: Is the

ophthalmologist to be censured for claiming the eye to be a potent factor in the production of headaches?

From years of practical experience and observation, I know that headaches do emanate from the above-named causes, either individually or collectively, and I do not wish to be understood as underestimating the wonderful advances made in each of these departments of medicine, but my purpose is to impress more clearly upon the mind of the physician that the eye, by virtue of its very delicate and complex mechanism, great nervous disturbance can and frequently does result from very slight ocular disturbance, and one of the most obvious manifestations, as before stated, is headache, and this, too, let me say, is often found in eyes which appear normal, for eyes which maintain normal visual acuity are those which, upon a careful examination, are frequently found to produce greatest nervous disturbance in their continued effort to overcome a slight existing anomaly. The physician has used his test-type (which every physician should have in his office), and has found the vision normal, therefore, in his opinion, no optic nerve trouble. He has satisfied himself that the eyes are straight, and therefore no muscle strain; he has gone even further and examined the lids, and found no evidence of inflammation there, so at once the eyes are passed as not being a factor in the production of headaches. This conclusion has been reached, I wish to have you infer, as a result of the physician's usual method of examining the eyes. But from his own method of reasoning, may I ask: What painstaking physician would claim perfect elimination of excrementitious products from the body simply because the kidneys are apparently properly functioning, to the total disregard of a chemical or microscopical examination of the urine, or the condition of the bowels and surface elimination? And yet not less inconsistent would this be than to pronounce the eye normal simply because the vision is normal. Again, what gynecologist would pronounce the uterus and its appendages healthy because the menses occur at their regular intervals, regardless of the quantity, quality and coincident general disturbance? Yet it is with some degree of difficulty that we are able to impress upon the average medical man the importance of the all-essential function in the eye—its *accommodation*. He is not ignorant of the presence of the lens, the ciliary muscles and the external muscles of the eyeball. He knows that a change of focus must take place in the eye in order that we may see with equal

distinctness the small and the large object in the field, likewise to fix for the near as well as the far point. He realizes that this is largely effected by a change in the curvature or convexity of the lens and other refractive media and surfaces within the eyeball, and that these changes are largely brought about by effort on the part of the very delicate little ciliary muscles, or, in other words, at the expense of a muscular exertion. Now, we are not surprised that the large, heavy muscles, for instance, of the lower limbs, cramp when submitted for too long a time to undue contraction or exertion, and we wonder not at the cry of the patient from the pain produced by cramps in the limbs—a cry for instance, familiar to all physicians who have had experiences in obstetrical work.

But are we not loath to credit to the ciliary muscle a similar right to "cramp" or spasm, with its accompanying pain, in its over-zealous efforts to hold the lens at a certain convexity or focus, in order to correct an existing hypermetropia, or astigmatism, or would it be unreasonable to ascribe to this *ciliary spasm* a causal factor in the too frequently found frontal or temporal headache? For in either case cited the conditions are practically the same. In the first (cramp and pain in the limb) is the cause is plain and unmistakable, the patient knows where the pain lies, while in the latter, (the cramp of the muscles in the eye with its accompanying pain), is as before stated, the true condition is too likely to be overlooked. The same cause (i. e., too great muscular exertion), which produced a spasmodic contraction and consequent pain in the limb is, therefore, not accredited to that infinitely more delicate muscle found within the eyeball, without mentioning, indeed, the vast difference in their respective nerve supply, which we all know is in direct proportion to the delicacy of their function, and why not then expect even an increased nervous disturbance from muscle strain or spasm in the eye? I call the physician's attention to this point, and purposely illustrate it as I do, to more thoroughly impress him with its practical import, and call to his mind the striking analogy—on the one hand a phenomenon common and recognized by all; on the other, one equally as certain in its existence, but frequently overlooked, for too often we are engrossed in looking for "big things," while lesser ones, but of greater importance, escape us.

Another matter analogous to this, and of equal practical importance to the physician is one so frequently met by the ophthalmologist that I beg indulgence for brief men-

tion. When man or woman approximates middle life, the physician, as a scientific mind, recognizes the fact that at this period in life all living tissue is liable to show signs of diminished agility. As physicians, we recognize this as a sclerosis, varying in degree at different ages and in different individuals; for instance, we know that while that same power of endurance found in earlier years may yet exist, yet we are not surprised, all other conditions being the same, to find the athlete of 30 years defeat his opponent of 40 years. We immediately conclude that the difference in years explains the result. But when the patient of 45 years of age perchance calls upon his or her physician, complaining of constant pain in the temples, "headache," occipital or frontal, dizziness and vertigo, what is more common than for us to ascribe these headaches and dizziness, if it be a lady, to the so-called menopause; or, if a man, to indigestion or torpor of the liver? Yet of like years watch this same physician or surgeon in his operating room, and he finds it very convenient to pass his needle to the nurse or attendant to have it threaded—the light is poor, or the fingers clumsy, but alas! there are none so blind as those who won't see."

He is also painfully aware of the fact that he tires bodily more easily than he did when he was 30 or 35 years of age, and observes that the daily routine of his labor is more telling on him than formerly. He does not get in and out of his carriage, or climb stairs, with his usual dexterity. He knows why. Simply because the muscular action of the body is performed at the expense of greater nerve energy—the muscles are slightly less limber, therefore slower to contract, and that easy rhythmic contraction which characterized his every move of earlier years is noticeably diminished; he realizes that a natural physiological sclerosis of living tissue comes on with advanced years. This, I say, the physician realizes in himself, and in a general way observes it in his patient, and yet does he make the practical application of these observations, in seeking intelligently for the cause of the disagreeable symptoms complained of by his patient, viz: headache, blurring, dizziness and vertigo? Does he recall here again his knowledge of *accommodation*, and remember that the power of *accommodation* diminishes with each advancing year, due to the same sclerosis taking place in the lens of the eye and the muscles which control it, and that there must inevitably come a time in each of our lives when the near or working point of vision passes beyond a convenient working distance, and that this

continual recession of the working or near point (Presbyopia) is calling forth an increase of exertion on the muscles of *accommodation*, which can only be compensated for by the use of a proper glass, in order to restore the normal working distance and afford relief to the muscle strain? (Excepting, of course, those cases in which myopia exists, wherein the myopia compensates for the recessions of the near point, and if the myopia be of sufficient degree, may entirely obviate the necessity of artificial assistance (glasses) in overcoming this continual recession of the working or near point, the explanation of the query: Why some old people never have to wear glasses to read, etc.) Or should hypermetropia exist, the difficulty is proportionately increased, and we have here, again, another illustration of too great strain existing, with its well known resulting nervous disturbance, manifesting itself in headaches and various other disagreeable symptoms. But do we always stop to realize the full importance of these symptoms, which are crying out for relief, and whose needs are so easily ministered unto? Simply by placing before the eye a glass which will increase the convexity of its own lens, and thereby relieve these muscles which have grown weary and exhausted in their vain effort to increase the convexity of a more or less stiff or sclerosed lens within the eyeball, thus bringing within proper and convenient range the eye of that needle or the print in the newspaper, which before could only be seen at arm's length, if at all; but most grateful of all, bringing to your patient relief from headaches which formerly rendered existence almost unbearable.

In my reference to headache and other nervous disturbances, the result of eye strain due to astigmatism, far-sightedness and near-sightedness, I refrain from the mention of glasses as much as possible, for every medical man recognizes that the only means of relief for headaches from such causes lies in a properly adjusted glass to the eye, but I have endeavored to bring before the mind of the physician the fact that the eye, being constructed and governed by the same material and forces as other parts of the anatomy, must suffer alike with other organs when submitted to unfavorable environment, and this being true, when we realize that but a very small percentage of the human eyes are found free from refractive errors (either hypermetropia, myopia, or astigmatism), and that all eyes (except the higher myopia, as above mentioned) will reach a period in life (if the individual becomes forty years of age or over), when,

if assistance in the form of glasses be not given, eye strain and coincident nervous disturbance must be the inevitable result, then the importance of eye strain as a factor in the production of "Headache" must appeal to all of us.

In discussing this subject I do not intend to offer criticism to any, neither do I wish to be judged narrow. My sole object is to impress the busy practitioner with a few points which I know bear direct upon his everyday experience, and these I have purposely illustrated as I have that they may the more clearly appeal to his judgment, and, as before stated, facts of which he is already aware, but in his anxiety to give relief to such a diversity of complaints—as only the general practitioner has forced upon him—might escape his attention.

103 State Street.

The Early Recognition of Carcinoma Mammæ†

By William Francis Campbell, M.D., Brooklyn, N. Y.: Surgeon to Williamsburgh Hospital; Demonstrator of Anatomy Long Island College Hospital; Assn't Surgeon to Kings County Hospital, and Long Island College Hospital.

Cancer of the breast is curable providing the operative procedure meets the pathological requirements. To meet these requirements and to fulfill the conditions necessary to success has been the line along which surgery of the breast has evolved, and from which it has found its most potent stimulus.

Many recall the time when the removal of a breast tumor was classed among the simpler operations. Later it was thought wise to remove the entire gland. Fifteen years ago Vollkman made an additional advance when he called attention to the necessity of cleaning out the axilla.

Step by step the operative field has been extended until the limit seems to have been reached in the operation, as taught by Halsted and Meyer, and accepted by advanced surgeons, as the one which best fulfills the pathological requirements.

This operation consists in the removal of the mammary gland with a considerable amount of skin; the thorough dissection of the axilla; removal of the sternal portion of the pectoralis major muscle; division of the pectoralis minor, and occasional removal of this muscle; if necessary, exploration of

the infra-clavicular and supra-clavicular spaces. This operation requires perfection of technique; operative skill; experienced judgment. It is comprehensive, thorough, far reaching.

By some it may be criticised as too radical to admit of general application. It is a matter of surprise to note how little shock is experienced by patients recovering from this operation. Experienced operators in this field have learned the value of a drop of blood, and it is the exception to find the patient leaving the operating table other than in excellent condition.

Dr. Halsted, who has probably had the most extensive experience in this class of cases, says that at the close of two or three hours of operative work the patient's pulse is rarely above eighty. Its justification is its undoubted efficacy, the fact that it gives us the highest percentage of cures. It is generally conceded that a patient who three years subsequent to operation has no recurrence is cured. It is upon this basis that our statistics are elaborated and analyzed. These statistics have been worked out with great accuracy and completeness. We are, therefore, enabled to speak definitely regarding the percentage of cases that are likely to be cured by operation. Dowd's analysis of 199 cases from the clinics of Bull, Rotter, Helferich, Cheyne, Dennis and May shows 39.6 per cent. cured. The statistics of Watson Cheyne gives the highest percentage showing 57 per cent. cures.

I believe it would be a fair statement to place the number of cures reasonably expected from the present radical operation at from 40 per cent. to 45 per cent. Compare these results with those from the older methods of operation.

Twenty years ago the elaborate statistics of Gross shows that the number of cures was 9.5 per cent. In the cases operated upon by Billroth there was 8.3 per cent. cures.

When we realize that by modern methods the percentage of cures has been multiplied by five the efficacy of the procedure is established and the results most gratifying.

It is an interesting subject of thought to speculate upon what the future may evolve in the line of therapy that shall supplant our present operative method. It is far more practical, however, to contemplate how with our present knowledge the number of cures can be increased.

Bennett May says: "So far as is at present known our only hope of achievement lies in the direction of more thorough and more early operation. The limit of what is possible in the former direction will soon be reached if it is not already reach-

†Read at a meeting of the Associated Physicians of Long Island, October 21st, 1899.

ed." It would be difficult to conceive of a more thorough and complete operation than that described by Halsted at the meeting of the American Surgical Association, 1898. The essential details of which have been referred to above. It must be apparent that from the operator's standpoint there is little more to expect; advancement must not be looked for in this direction. There will be further perfection of detail but not extension of scope. If then we cannot look for advancement in a more thorough operation we must look for it in earlier operation.

An analysis of Dowd's 29 cases published in the *Annals of Surgery* March, 1898 shows that where the tumor was small without adherence to skin or pectoral fascia, operation gave the best result. These cases in every instance passed the three years limit. What the surgeon has to contend with is the large number of cases which have passed the primary stage where the disease is a local one and entered the second stage, when the infection is widely disseminated and operation of little value. Too often the primary stage is a stage of tentative diagnosis, and blind procrastination which often results in the postponement of the means of cure until the means are inadequate.

Bryant says: "It is at the very early stage of the disease that a diagnosis is most essential, since then, if at all, a cancer may be regarded as local and consequently as a curable affection." It is at once apparent to what extent surgical success depends upon early recognition.

It is not feasible at this time to discuss the etiology or pathology of this interesting disease, or even allude to the unusual varieties of breast cancer, but simply to consider the predisposing cause, the early symptoms, the conditions likely to be mistaken for cancer and their relation to an early recognition of this disease.

In considering a case of mammary cancer, due weight will be given to the causes which have been found to be predisposing factors in this affection.

Of first importance is the patient's age. There have been reported a few cases of cancer occurring in comparatively young people. As a rule the patient will be over 35 years. The largest number of cases occur between 45 and 50. It is a disease associated with degenerative changes, hence may be looked for after the climacteric. It is most frequently found in married women. Whether this circumstance is due to the age at which cancer occurs when the majority of women are married, or to the irritation incident to a functioning gland

is not finally determined. The latter theory has much to commend it.

The family history is to be taken into consideration and given its due weight. What part heredity plays in the development of cancer is difficult to formulate. There is undoubtedly a tendency in some families to the development of cancerous growths.

A remarkable case illustrating this tendency is cited by Shields, where a woman died with cancer of the stomach, one of her daughters died with cancer of the stomach, another died with cancer of the breast; and of her grandchildren, two died with cancer of the breast, two with cancer of the uterus, one with cancer of the bladder, one with cancer of the axillary glands, one with cancer of the stomach, and one with cancer of the rectum. Other cases are cited quite as remarkable. It would seem that heredity in cancer has much the same influence as in tuberculosis.

The observations of Williams on the role of heredity in cancer are striking. In his analysis of 134 women with cancer of the breast, he found that pulmonary tuberculosis was by far the most prevalent disease among their relations. His conclusion is that a large portion of cancer patients are the surviving members of tuberculosis families.

Irritation, whether a primary or secondary cause of cancer, is a well established predisposing factor. Cancer of the tongue, lip, œsophagus, stomach, gall bladder and scrotum, all demonstrate the effects of irritation.

It would be difficult to find a woman who had reached the age of 50 without suffering from some form of breast irritation.

Traumatism, such as blows, kicks, falling against sharp projections, has been followed by malignant growths in various parts of the body. The breast is specially liable to such injuries, and it is a well established clinical fact that cancer of the breast has followed speedily upon injury to the part.

Old scars, sites of former abscesses, chronic inflammation and sore nipples have so often preceded the cancerous stage that their influence seems undoubted.

Any eczematous irritation about the nipple with a tendency to chronicity, Paget has shown is the beginning of a process which terminates in a peculiar form of cutaneous carcinoma, and in a large proportion of cases carcinoma of the mammary supervenes. Hence eczema, though simple, is never to be regarded lightly. That it may eventually lead to, if it is not already, cancer, should ever be in the consultant's mind. Among the predisposing factors, therefore, age, family history and irritative

causes will receive their due consideration.

CONSIDERATION OF EARLY SYMPTOMS OF CANCER.

The symptoms of breast cancer as taught in many of our text-books are inaccurate, incomplete and misleading.

The relative importance of these symptoms, and the proper methods of examination are not sufficiently emphasized to be an accurate guide to an early diagnosis. Shields believes that in the sense of touch and intelligent manipulation we have the best means of detecting carcinoma in its early stages. He teaches that the microscope is to be looked upon as an auxiliary to clinical observation, not as superseding it, for as he sagely remarks, "There may be microscopical differences of opinion as well as clinical."

His method of examination is described as follows:

"The thorax should be thoroughly exposed, patient reclining on a sofa. The breast should be examined with the 'flat of the fingers,' never by pinching up portions of the breast tissue between the thumb and finger." All parts of the breast should be examined. Carcinoma is usually single; if we find more than one tumor in the same breast it is rather against carcinoma, although the existence of carcinoma with an adenoma or cyst should always be kept in mind. Both breasts should be examined, for a double carcinoma may be present at an early stage of the disease. The most striking early clinical symptom is the marked sense of hardness felt upon manipulation.

The nodule may be exceedingly small yet the stony hardness will be striking and characteristic. The location of the tumor is apt to be nearer the periphery than the center. Statistics show that the upper and outer quadrant is the most frequently affected. However location is a matter of accident. The stony infiltration is the earliest and most valuable sign we possess. The outline of the deposit is not perfectly rounded, but rather inclined to be somewhat nodular. In addition to this the surrounding breast tissue is attached to the tumor and moves with it, giving the sense of immobility and fixation. Pain is not an early symptom of breast cancer. Cancer may long lie unsuspected especially in fleshy women because of the absence of this symptom. It is a grievous fallacy to attempt to estimate the gravity of mammary tumors by the amount of pain present. There is neither quiescent pain or pain on manipulation. If pain be present one would be

lead to suspect inflammatory rather than malignant origin.

There is, however, an exceptional pain symptom, which, although rare, is important, and has specially impressed itself by a case which I shall cite later. This pain is not constant, but is an occasional twinge, sharp and piercing like a needle, starting in the thorax and going down the arm of the affected side. A case which illustrates this condition is as follows: Mrs S., married, 48 years, consulted me one and a half years ago for pain in the left breast. She described it as starting like an electric shock in the breast and going down the arm of the affected side. It would occur three or four times during the day. Seemingly worse at night. She first felt this pain while riding in an open car and thought it was caused by "catching cold." Upon examination, I found the mamma well developed, nipple normally prominent, no signs of previous inflammatory condition; no pain or tenderness on palpation.

I could find no tumor present, I so stated, gave her ample assurance that there was no cause for alarm and satisfied my patient by denominating her pains as "neuralgic." Nine months later the patient presented herself for a second examination, and I found a hard, immovable tumor as large as a walnut midway between the nipple and periphery. Some dimpling of skin and palpable axillary involvement. The pain had not increased in severity or frequency. The discovery of the tumor caused her to return. Whether a more careful examination and a more intelligent touch could have discovered this condition at the first examination is a subject for reflection. I think it quite probable. Certainly a proper appreciation of this pain symptom would have led me to impress upon my patient the necessity of regular examination at short intervals.

The general assumption that retraction of the nipple is an essential symptom of carcinoma is fallacious and misleading. It is neither an essential symptom or an early one. Whether the nipple be retracted or not, depends upon the location of the tumor. Retracted nipple as a symptom by itself is of no special value. It may be caused by congenital defects, inflammations and old abscesses. In association with other symptoms it is significant and confirmatory. Of more value as an early symptom is "dimpling of the skin." It is caused by the contraction of fibrous tissue lying between the skin and the mammary tissue. It is quite characteristic when present; its absence may be due to the growth being deeply seated.

Discharge from the breast either serous

or bloody, while it may be associated with other conditions, yet it may be the very earliest appreciable symptom of carcinoma. Gross estimates that it occurs in 7 per cent. cases. Bryant cites three cases in which a bloody discharge occurred 6 months, 2½ years and 4 years, respectively, before the tumor was discovered.

Palpable enlargement of axillary glands shows that the disease is spreading from its primary starting point; where glands can be detected in the axilla the disease is far advanced. The presence of these glands giving the same feeling of hardness as the tumor, is strong evidence in favor of cancer. Their absence is no proof of the tumor's innocence, for the axilla may already be infected without being able to detect enlarged glands.

We should ever keep in mind other causes of glandular involvement such as tubercular affections, syphilis, eczema and benign tumors from inflammatory irritation.

Involvement of axillary glands may confirm a diagnosis, but it is not an early symptom. There are certain chronic inflammatory swellings which may complicate and make a diagnosis difficult, such as chronic mastitis, tuberculous mastitis and syphilis. These affections may simulate cancer in the retraction of the nipple and lymphatic involvement, yet the dimpling of the skin is absent and much stress is laid upon the fact that these inflammatory affections are tender and painful on manipulation, while cancer in its early stage is seldom painful or tender.

These affections do not present the definite outline or the extreme hardness found in cancer. While inflammatory tumors occur most frequently in connection with lactation, cancer very rarely does. When there is doubt in a very early case, there can be no harm in applying counter-irritation and pressure and administering mercury and iodides, providing the trial be short and the case be kept constantly under observation.

However definite we may outline diagnostic features there are cases not uncommonly met with, where the diagnosis is exceedingly difficult. In such cases an exploratory incision is necessary and obligatory. The use of exploratory puncture is to be condemned, and I doubt if any modern surgeon would feel justified in using it. Richardson in the Boston Medical and Surgical Journal, 1898, cites two cases, in the first an exploratory puncture was made with a needle. In both cases the microscopical findings were negative. Both subsequently developed carcinoma. Both showed areas of carcinomatous infiltration along the line of puncture. Exploratory incision al-

lows the tumor to be seen and felt and usually an immediate diagnosis can be made. Consent ought always to be previously obtained, so that the entire breast may be removed if the surgeon so decides.

While fully realizing that we cannot lay down hard and fast rules in this as in other affections, or establish an unfailing dictum, yet there are some trustworthy signs of mammary cancer upon which we may rely in the consideration of each and every case. There are diagnostic points which are essential and others which are non-essential. Some signs make a diagnosis, others but confirm it. By giving each their due weight and by persevering clinical observation of a continuous and accurate nature will we acquire the facility to enable us to recognize a condition which so manifestly depends for its cure upon early recognition.

Dr. Rudolph Matas says: "The real hope for improvement does not rest so much upon an extension of operative procedure and perfection in technique, but in an early recognition and early extirpation of the primary focus of invasion."

On the Therapeutics of Heroin.

By Dr. Eugenio Medea.

I was desired by our chief, Dr. Pietro Conti, to investigate under his supervision the clinical uses of heroin, in the division of the Ospedale Maggiore which is under his direction.

The observations I made relate to about fifty cases, the greater part of this number being in patients suffering from various diseases of the respiratory tract, while the remainder were patients who were not suffering from any affection of the organs of respiration.

In nearly all the patients the remedy was administered by the hypodermic method.

For this purpose we made use of the hydrochloride of heroin, for the reason that this preparation is very soluble in water; this substance resembles heroin in regard to its external appearance, but it possesses a higher point of fusion, varying between 230 deg. and 231 deg. The aqueous solution we employed was in the proportion of 1 to 100.

We selected the hypodermic method for our investigations for the reason that it gives a more prompt and efficacious action, and in order to be able to make more accurate comparisons of the effect of the remedy in various patients, bearing in mind the decided individual differences that are always seen when medicinal substances are administered by the mouth.

The observations were principally made before the morning visit, while the patients were still fasting and in a condition of absolute rest. During the whole time of the observation we sought to keep them in a state of the utmost quietness, and to keep away from them every external source of disturbance which might have in any way lessened the value of the observation.

I certainly do not pretend to have accomplished observations that were rigorously exact and scientific, being well aware of the great difficulties which lie in the way of such investigations, which necessitate favorable surroundings, trained attendants, and means of investigation far more delicate than those at my disposal. I believe, however, that my observations may possess a relative value, if their results are considered synthetically, from a purely scientific point of view. For my own part, I exerted the most scrupulous care not to allow myself to be drawn into error by preconceptions or by too ready and hasty conclusions.

The initial dose of the hydrochloride of heroin was usually about 8 milligr. (gr. $\frac{1}{8}$ to $\frac{1}{4}$); this dose was gradually increased until it reached 1 centig. ($\frac{1}{16}$ gr.); in several cases we began from the first with the latter dose of this remedy, although we never gave a larger amount than this in a single injection.

Symptoms of excitement worthy of being noted were never observed after the injection; on the contrary, after an average period from ten to fifteen minutes afterwards, patients felt a distinct sensation of well-being, often due to the alleviation of the pleurodynia or the cough from which they were suffering; very often there was manifested a tendency to sleep which finally brought about a quiet and refreshing slumber, never very profound, which lasted a few hours, and never left behind it any cephalalgia, nor sensation of heaviness in the head, nor nausea or gastric disturbances.

In a number of patients a slight degree of general improvement became manifest; some of them, together with this, experienced a sensation of warmth. When sleep came on it was not unusual for a slight degree of perspiration to appear.

In only about one-third of the cases there occurred a sensation of vertigo, about ten minutes after the injection, this being sometimes accompanied by some buzzing in the ears. This condition of dizziness was, however, but a very slight one, and usually disappeared within half an hour after its beginning. In one instance only was this state of dizziness protracted for about six hours, being accompanied by slight headache, and finally disappearing without leav-

ing any further sequelæ. In one case only there was a slight tendency to syncope about three-quarters of an hour after the injection, and in another case there was manifested a tendency to vomit. The great majority of the patients, including those who were very feeble or very short of breath, in whom the authors recommend the greatest care, stood the remedy so well that, after having once experienced the relief it gave them, they always asked for it with the greatest confidence in its good effects.

From the first moment that the medicine began to act it could be observed that the patients breathed more regularly, that their inspirations were deeper, and that the respiratory pause was prolonged.

Besides the effects produced upon the respirations by the injections, we observed with special care and attention the modifications that were brought about in the pulse, as to the frequency and as to the character of the blood pressure, and in the temperature. These observations were made upon all the patients at various intervals after the injections.

In order to measure the blood pressure we made use of the sphygmomanometer of Riva-Rocci, taking the radial artery into consideration. The temperatures were, whenever it was possible, taken by the writer himself and in the rectum.

The modifications brought about by heroin in the functions of the various apparatuses begin to become apparent about 20 minutes after the injection, and, as a rule, reach their maximum in about three-quarters of an hour. Later on, and slowly, the functions of the various organs return to their former state.

From the total of the observations we made we are able to deduct the fact that as soon as the action of the heroin becomes manifest in the organism, there is produced a diminution in the frequency of the breathing, and in that of the pulse, with a lessened blood-pressure and temperature.

I must here note the fact that, of course, we did not take into consideration the cases in which the diminished respirations were due to the fact that the pleurodynia had disappeared or the cough ceased; for in these instances the very marked diminution could be ascribed to another evident cause.

I. The diminution in the frequency of the respiratory movements was noted in the great majority of the cases; in healthy people the number of respirations sometimes came down from 24 to 16, from 22 to 14, etc.; in those suffering from dyspnea the breathing was reduced from 36 to 28, from 40 to 24, the rate of breathing, six hours after the injection, remaining between

22 and 24. It may be stated that in general the diminution varied per minute between six and eight respirations. It was in a very few cases only that this action of heroin failed to appear, it quite exceptionally (in 2 cases) a very slight increase in the number of respirations was observed.

II. Contrarily to the experience of most observers, I was able to note a diminution in the number of the arterial pulsations, which commonly averages about seven or eight pulsations to the minute, and which is especially marked about 40 minutes after the injection. In a few instances the diminution amounted to 11 (70-61 in 20 minutes), to 12 (94-82 in 20 minutes) and to 14 (100-86 in 40 minutes) beats to the minute. The cases in which a diminution was not observed were exceedingly few: in three cases only was there any increase in the number of pulsations.

I was not able to establish a constant relation between the diminution of the arterial pulsation and the lessened frequency of the number of respirations.

III. Somewhat less constant, yet sufficient to allow of formulating an opinion, were the results obtained in regard to the behavior of the blood pressure.

In most of the case a diminution of the pressure* was observed, which often was manifested within 20 minutes after the injection, but which usually reached its maximum about fifty minutes after the administration. The lowering was in a few cases very marked (in one case from 230 to 185 mm. in 50 minutes; in others from 124-118, from 170 to 150, etc.): in general it averaged from 10 to 15 mm.; in several cases the difference was even less, so that we could only call it a tendency towards a diminution of the pressure.

In a few cases (about one-seventh of the observations) the pressure was, on the contrary, increased after the injection. This fact was constantly verified in an old tubercular patient, but this increase was invariably associated with a diminution of the respirations and the pulse.

In the other cases also in which no diminution of the arterial pressure was observed, the heroin always exercised its customary action in lessening the number of respirations and of pulse-beats. In exceedingly few cases (not more than three) there occurred no variations in the pressure.

*We must here remember the fact that there are great difficulties in the exact valuation of the numbers given by the Sphygmomanometer, and that the average pressure according to v. Basch is in man from 120 to 150 mm.

In these cases also there was no constant relation between the diminution of the pressure and the number of the pulse-beats.

IV. In regard to temperature, we were generally able to observe a slight fall which was often noticeable within twenty minutes after the injection, and still more frequently after the lapse of 30 or 40 minutes. This fall occasionally preceded by a slight rise which occurred about 10 or 15 minutes after the injection.

We were never able to observe very marked falls in the temperature; it was quite seldom that it amounted to as much as one degree C.; on an average it usually was about three tenths of a degree C.

Instances in which there was no modification of the temperature occurred but very seldom.

Having thus shown, as well lay in our power, the physiological action of heroin, as displayed in a fair number of individuals, either healthy (as far as concerned their organs of respiration), or suffering from diseases of the respiratory tract, we deem it useful to publish some of our observations, which, representing as they do the average of the results we obtained, will afford a pretty accurate notion of the action of heroin upon the human organism:

Charles R. aet. 43. Sequelae of mitral and aortic endocarditis. Right Inguinal hernia. Serous peritonitis.

Hour 8, pulse 72, respiration 20, pressure 115 mm., rectal temperature 37.4 C. (99.3 F.). Injection of 1 cgr. ($\frac{1}{8}$ gr.) of heroin. Hour 8:45, pulse 67, respiration 14, pressure 105, rectal temperature 37.3 C. (99.1 F.) Diminished intensity of the symptoms.

Pietro L., aet. 20. Stenosis of the ileum. Hour 7:30, pulse 70, respiration 22, pressure 110 mm., rectal temperature 37 C. (98.6 F.) Heroin 1 cgr. ($\frac{1}{8}$ gr.) Hour 8:5, pulse 64, respiration 18, pressure 102, rectal temperature 36.8 C. (98.2 F.) Profuse sweat, dizziness.

Giuseppe T., aet. 73. Right ischialgia; pulmonary emphysema; arterio-sclerosis. Hour 7:45, pulse 75, respiration 20, pressure 170 mm., rectal temperature 37 C. (98.6 F.) Heroin 1 cgr. ($\frac{1}{8}$ gr.) Hour 8:5, pulse 69, respiration 14, pressure 140 mm., rectal temperature 37.1 C. (98.8 F.) Hour 8:30, pulse 66, respiration 140 mm., rectal temperature 37 C. (98.6 F.)

Lorenza V., aet. 79. Arterio-sclerosis; sequelae of left pleurisy. Hour 7:10, pulse 70, respiration 21, pressure 220 mm., rectal temperature 36.7 C. (98.1 F.) Heroin 1 cgr. ($\frac{1}{8}$ gr.) Hour 7:30, pulse 61, respiration 13, pressure 180 mm., rectal temperature 36.8 C. (98.2 F.) Hour 8, pulse 60,

respiration 14, pressure 185 mm., rectal temperature 36.6 C. (97.9 F.)

Giovanni L. Right apical pleuro-pneumonia; pulmonary emphysema. Hour 8:20, pulse 94, respiration 34, pressure 140 mm., rectal temperature 38 C. (100.4 F.) Heroin 1 cgr. ($\frac{1}{8}$ gr.) Hour 8:40, pulse 82, respiration 26, pressure 130 mm., rectal temperature 37.9 C. (100.2 F.)

Gioglio C., aet. 47. Right pleurisy. Hour 7:45, pulse 100, respiration 24, pressure 80 mm., rectal temperature 37.3 C. (99.1 F.) Heroin 1 cgr. ($\frac{1}{8}$ gr.) Hour 8:15, pulse 86, respiration 18, pressure 72 mm., rectal temperature 37.1 C. (98.8 F.)

Bernardo V., aet. 30. Left pleuro-pneumonia; icterus. Hour 7:20, pulse 68, respiration 28, pressure 120 mm., axillary temperature 38 C. (100.4 F.) Heroin 8 millig. ($\frac{1}{7}$ gr.) Hour 8:20, pulse 62, respiration 24, pressure 105 mm., axillary temperature 37.3 C. (99.1 F.)

Marano S., aet. 28. Right apical broncho-alveolitis. Hour 7:10, pulse 88, respiration 24, pressure 115 mm., rectal temperature 37.8 C. (100.1 F.) Heroin 1 cgr. ($\frac{1}{8}$ gr.) Hour 8, pulse 72, respiration 17, pressure 105 mm., rectal temperature 37.4 C. (99.3 F.) Marked improvement of all symptoms.

Giacomo P., aet., 32. Advanced pulmonary tuberculosis. Hour 7:15, pulse 100, respiration 30, pressure 105 mm., axillary temperature 39 C. (102.2 F.) Heroin 1 cgr. ($\frac{1}{8}$ gr.) Hour 8:40, pulse 96, respiration 24, pressure 95 mm., axillary temperature 38.3 C. (101 F.) Slight general improvement; dizziness.

A superficial examination already enables us to see a difference between the action of morphine and that of heroin; we know that in man, even after the administration of small doses of morphine (grm. 0.01, $\frac{1}{8}$ gr.), there appears at first symptoms of excitement, accompanied by insomnia, general agitation, and sometimes even hallucinations; then follows a slight headache, a blunting of the sensorium, somnolency, deep sleep and a disagreeable awakening. We all know from practical observation that the injection of half the above amount of morphine, given for analgesic purposes, will sometimes produce fairly marked phenomena of excitement and agitation, occasionally accompanied by nausea and vomiting.

Heroin causes no trace of such disagreeable occurrences, with the exception of very slight disturbances to which we have referred.

In regard to the influence of morphine upon respiration, we know that this is not exerted for a long time, either in man or

the animals, and when there occurs a modification, it consists in a slowing due to the diminished excitability of the respiratory centres; this slowing, however, is very far from occurring with these characters of regularity, of increase of length of the respiratory movement and of augmentation of its strength, which are so important in order to prevent a stagnation of the secretions, and which are obtained with heroin.

As to the action of morphine upon the organs of respiration in cases of severe dyspnea, when compared with that of heroin, we will merely reproduce one of our observations which deals with a patient affected with a paralysis of the recurrent.

Hour 3:40, pulse 100, respiration 34 (tirage). Heroin 1 cgr. ($\frac{1}{8}$ gr.) Hour 4:20, pulse 76, respiration 18 (sleep, prolonged inspiration).

While on the other hand: Hour 3:10, pulse 84, respiration 30. Morphine 1 cgr. ($\frac{1}{8}$ gr.) Hour 3:33, pulse 78, respiration 28 (sleep, agitated).

On the other hand, if we remember that codein has a convulsing power even greater than that of morphine, and that the relation between a fatal dose and the therapeutic dose of this substance is as 0.1:0.1-10, while that of heroin is as 0.1:0.001-100, we will understand why the latter has of late received so wide a popularity in therapeutics.

With regard to the frequency of the pulse, we know that under the influence of medicinal doses of morphine the cardiac contractions are accelerated through excitation of the cardiac ganglia; but if the dose has been a large one this acceleration lasts for a short while only, and is replaced by a slowing which is first determined by an excitation of the inhibitory centres of the brain and heart, and later on is continued by a paralysis of the musculo-motor ganglia of the heart.

The action of heroin upon the pulse might, perhaps, be attributed to a primary exciting action over the inhibitory elements of the cardiac movements, without neglecting, however, the effect that must be produced by the state of greater quiet and well-being in which the patient finds himself, as a result of the improved condition of his respiration.

As to the blood pressure, it rises at first under the influence of morphine, and then falls, owing to the primary excitation and to the secondary paralysis of the vaso-motor centre. The action of heroin upon the pressure is probably due to the influence exerted by the marked increase in the duration of the respiratory act, as well as to the greater energy of the respiration, which act both

in virtue of a mechanico-physical cause and of a nervous action upon the vaso-motor centres.

Finally, in regard to the temperature, it is said that this increases at first if the dose of morphine has been a small one, while it markedly decreases if the dose has been a toxic one. In this respect the experiments of Lepine upon the lowering of the temperature after the administration of morphine are of great interest. With the diminution of the temperature produced by heroin, we must bear in mind, besides the influence brought to bear on it by the modifications of the circulation, the fact observed by Dreser, relating to the lessened consumption of oxygen which follows the use of heroin.

This rapid comparison shows that the action of heroin upon the central nervous system is very similar to that of morphine, excepting in that heroin acts less violently so that we are enabled to use it with more accuracy and less danger, especially in regard to its action on the organs of respiration, as it has a much less depressing action than morphine upon the respiratory centres and has a very calming effect upon the irritability of the mucous surfaces.

The therapeutic value of heroin we investigated especially upon patients suffering from respiratory troubles, from the standpoint of its effect upon cough and dyspnea.

A goodly number of this class of cases belonged to the tubercular forms, in more or less advanced stages. In nearly all of these cases heroin proved very useful and prompt in quieting the persistent cough, in regulating the breathing, and in quieting the patients. Even in a few cases in which, perhaps on account of the smallness of the doses given (6 to 7 milligr.), there were no objective changes in the number of the respirations, the patients felt better and it seemed to them that they breathed more freely.

When the injection was made in the afternoon the patients were nearly certain to pass a comparatively reposeful and quiet night.

It was more especially in the phthisical patients that we observed the variations in temperature of which we have already spoken.

Even in those patients in whom the injections were continued for a long time (even for a month) we never observed signs of the formation of a habit, nor did we have to increase the dose in order to obtain a satisfactory effect.

We also found heroin useful in a good number of cases of pulmonary emphysema with chronic bronchitis. Again, besides the quieting effect upon the cough and the

regulation of the breathing, we observed that it produced a more easy expectoration.

In bronchial asthma, on the other hand, we never obtained any benefits from heroin. A man 30 years old who had been since childhood subject to severe attacks of bronchial asthma, which, according to him, could only be combated with injections of morphine. This patient reached the dose of five centigrammes of heroin daily by the mouth, without experiencing any improvement. The examination of this class showed that the pulse and the pressure were modified in the usual manner, while heroin had no effect upon the frequency of the respirations.

During the night we had to have recourse to an injection of morphine, which alone permitted the patient to rest.

Heroin was also employed successfully in some forms of acute pleuro-pneumonia: in these it acted very efficaciously, more especially in regard to the pleurodynia and its concomitant dyspnea, giving the patient distinct relief, without the occurrence of any of those phenomena of depression that are so easily produced after the use of morphine when there is a lowering of the vital force associated with an affection of the respiratory organs.

In many cases of pleurisy attended with pleurodynia and resulting dyspnea, the rapidity of the action of heroin (which was sometimes manifested within ten minutes) was quite surprising in its effect against the pain and the notable diminution of the respirations.

In various forms of broncho-pneumonia, often associated with influenza, and such as we often see in our hospital wards, we also obtained marked benefits by the use of heroin.

Heroin was of a somewhat less degree of usefulness in whooping cough.

The analgesic virtues of heroin were tried in several cases of ischialgia, in which we noticed a distinct diminution of the pain nearly immediately after the injection and lasting for about a day: the sensation of well-being lasted for several hours. Heroin proved equally useful in a case of intercostal neuralgia, in several instances of myalgia, and in arthralgia; of course, this refers to a relative usefulness, and not to a stable and curative effect. In one case of lead colic we obtained a very rapid and effective result with heroin; the pains diminish within ten minutes after the injection, and the patient went quietly to sleep. When he awoke he said that he felt as if he were cured.

In a case of neurasthenic local pain heroin gave us good effects, although the patient

who, by the way, was very excitable, complained of some slight general disturbances (feeling of weight in the head, nausea).

We have not a sufficiently extensive experience with heroin in the treatment of nervous insomnia, but, on the other hand, we treated some delirious and febrile patient by means of heroin, in order to obtain a quieting and narcotic effect, giving as much as two centig. a day with good results and no unpleasant symptoms. We have unfortunately not had any opportunity to test this substance in a case of morphine-habit.

To my personal observations in regard to the therapeutic value of heroin should be added those of Dr. Conti who, of late, has made a considerable use of heroin in his private practice, and finds it exceedingly useful in coughs, especially when due to bronchial irritation, to laryngeal troubles, to severe colds, and in the bronchitis of influenza. We must take into special consideration the prompt and certainly efficacious effect of heroin in estimating its value in private practice.

Dr. Conti administers heroin in the form of pills containing 5 millig. (1-10 gr.) of which he prescribes two or three a day.

Such are the results of my experience, which has lasted for at least three months, with this remedy, in consideration of the facts observed, and owing to the specific action in experts upon the organs of respiration, besides the fact that it gives no disagreeable results, deserves, it seems to me, may be advantageously substituted for morphine in a large number of cases.

A Study in the Treatment of Urethritis.

By Dr. A. B. Clayton, Norfolk, Va.

Urethritis is an inflammation of the mucous membrane of the urethra, which may be acute or chronic, simple or specific, and if left untreated runs a definite course, nature in time attempting a cure. Our object then in the treatment of this disease should be to aid nature in her efforts to cure. We cannot overthrow nature's laws, but it should be our duty to learn these laws and labor to obey them; knowing that in obedience alone lies our only hope of success in our efforts. In the early stages, our efforts should be directed toward a maintenance of cleanliness and the prevention of the spread and growth of the gonococci. This is best accomplished by copious irrigations of the urethra with weak antiseptic solutions. In the declining stages, nature should be assisted by use of astringents.

By such treatment, the disease will not be absorbed but the symptoms will be lessened in severity and the duration of the disease much shortened.

Before entering into the method of treatment, which I wish to advocate in this paper; I think it will not be amiss to refer briefly to the various plans of treatment which have been from time to time advocated by many prominent men.

1st.—EXPECTANT PLAN OF TREATMENT.—This plan of treatment deserves but a passing notice: Fournier and other French surgeons were first advocates. By this plan, all treatment is deferred until the declining stages of the disease is reached: from four to six weeks after the beginning of the attack. This disease runs its natural course until nature attempts a cure, which is shown by a subsidence of the acute inflammation. The surgeon comes to the relief of nature by the internal use of balsams and by injection and irrigation. This plan of treatment cannot be recommended. It should be the surgeon's duty to assist nature from the very beginning of the disease, and not to expose the patient to the most serious complications of the disease by allowing it to go unchecked. Few surgeons could hold their cases under such circumstances, and justly so.

2nd.—ABORTIVE.—Few surgeons of the present day advocate this method of treatment. The older surgeons attempted to abort gonorrhoea by injections of strong solutions of nitrate of silver, with the result of doing infinitely more harm to a delicate and sensitive urethra than they did to the cause of the disease. I do not think strong antiseptic solutions should ever be injected into the prethra with a view of aborting gonorrhoea? Sometimes I have succeeded in aborting the disease by copious irrigations of weak solutions of potass. permang., no discharge being seen after the third day of treatment. I think when the disease is seen in its very earliest stages, one is justified in making an effort to abort it by irrigations with weak antiseptic solutions: never by strong injections.

3rd.—METHOD BY BALSAMS INTERNALLY AND HAND INJECTIONS.—This method is largely in use at the present day. Some use the balsams from the beginning of the attack, together with injections of potass. permang., zn. sulph., nit. silver, bismuth, &c. A small hard-rubber or glass syringe, holding two or three drachms is used: the patient himself using the injection according (perhaps) to the surgeon's directions. I object to this method of treatment for the following reason, viz:

a. The patient is ignorant of the value of

antiseptics, and aseptics and will often infect himself by the constant use of a dirty syringe.

b. The solutions used for injections are in such a small quantities that the urethra is not properly flushed out, but in order to make up for this deficiency, the surgeon will invariably order these hand injections too strong; thus often doing harm by their use.

c. If the disease has extended any distance in the urethra, the injected fluid as a rule does not reach the diseased surface. Hand injections are usually used in the declining stage of the disease. At this time, the entire urethra;—a closed canal, nine inches in length and filled with innumerable crypts, which afford excellent hiding places for the germs of the disease—is invaded by myriads of gonococci and other germs. How then can such a small instrument, holding only a few fluid drams, successfully combat such an invasion? In my opinion, such treatment can only be of use when only the first few inches of the anterior urethra is invaded.

d. It will often be impossible to get the patient to inject the urethra properly.

4th.—METHOD OF IRRIGATION BY RETROJECTION.—This method is much advocated by some of the leading genito-urinary men in this country and abroad. In my own hands, it has not proven as satisfactory as the method I will presently describe. I do not think it advisable to pass any instrument into the urethra or bladder for the purpose of irrigation, when this can be done as well from the meatus without the passage of any instrument; thus avoiding any risk of infection or injury to the urethra. Further: this does not "balloon" out the urethra, as when the irrigation is attempted from the meatus, thus losing the good effect of having the antiseptic solution brought into more intimate contact with the diseased surface. Those who insist upon this method of treatment should use a soft catheter, for the use of irrigation, and dispense with the use of hard instruments.

Having called attention to the various methods of treatment, I wish now to put before the profession, what my personal experience and studies under leading genito-urinary men of this country; have taught me to be the best method of dealing with gonorrhoea. During my early years of genito-urinary work, I experienced much trouble in treating this disease to the satisfaction of myself and patients, but of late years the method of irrigation, first advocated by Halsted, has proven in my own hands, the most successful method of treatment.

When a patient first presents himself to my office for treatment, I first determine the extent of inflammation and the duration of the disease. I then examine the pus for gonococci. This is done by the following method, viz:—A small quantity of pus is squeezed from the urethra and placed on a cover-glass and spread with a glass rod into a thin film, and then dried by passing rapidly through an alcohol flame. On this, place a drop of methyl blue solution, allow to remain for a few minutes, wash off with a jet of cold water from a wash-bottle; mount in Canada balsam and then examine. If gonococci be present, they will be seen in the pus cells, usually in pairs; looking not unlike small grains of gunpowder. If such be present, I explain to the patient, (provided he has sufficient intelligence) the nature and cause of his trouble, and warn him that it will probably take from two to six weeks, perhaps more; to effect a permanent cure. If no gonococci be present, I give a somewhat more favorable prognosis, but whether the disease be specific or non-specific, I employ the same method of treatment. My next step is to determine the extent of the inflammation. If I have reasons to believe the posterior is involved, I flush out the anterior urethra either from the meatus or through a soft catheter, and then have the patient pass his urine in two portions. If pus and clap threads are present in the first portion, it is proof that the posterior urethra is involved. This may also be determined by using two glass urine tests without previously flushing the urethra.

In simple cases of anterior urethritis, when the inflammation is not too severe, I begin at once by irrigating the urethra in following manner, viz:—The patient drops his trousers and drawers below the knee, and sits upon a hard-bottom chair. His clothes, I protect by a rubber cloth, and between his legs I place a bucket to catch the return fluid. It is better to use a Kelly's pad, so the fluid can be easily drawn off in the bucket. I begin my first irrigation with a hot saline solution of permang. potass., temp. 105 to 120, and the strength 1 to 10,000. Of this solution, I run in about two quarts from a reservoir placed about 4 or 5 feet from the patients head, using a two-way gutta percha nozzle, first advocated by Halsted. This should be placed firmly into the meatus and held in the median line; the pressure being firm enough to prevent the fluid from escaping by the sides of the nozzle. In the meantime, the penis is held firmly by the thumb and fore-finger of the left hand, while with the right hand, the nozzle is held securely

in place. The return flow can be regulated by the finger over the outlet. In the same manner, the hydraulic pressure can be regulated so that the anterior urethra alone is irrigated. Further: by its use, the urethra can be fully "ballooned" out, thus the hot antiseptic fluid can be brought into more intimate contact with the colonies of gonococci, which find lodgings in the crypts of the urethra, and tend to penetrate the epithelial lining.

In using this method I flush out the urethra inch by inch, until the fluid reaches the compressor urethra muscles. I then keep the urethra distended to this point regulating the pressure by return nozzle, so as not to allow the fluid to enter the posterior urethra. In the average case, irrigation by this method should be used twice a day. I usually see my cases between 8 and 10 A. M. and 6 and 7 P. M. If the irrigation is well borne, I gradually increase the strength of the solution until 1 to 4,000 strength is used. The rapidity with which I increase the strength of the solution varies with the amount of the inflammation present. If the inflammation subsides rapidly, I rapidly increase the strength of the irrigating fluid, but gradually reduce the number of irritations. Usually after the third day, improvement is seen; the discharge grows less and gonococci become few in number. At the end of the second week, all gonococci are usually absent. In favorable cases, all visible discharge will usually cease in two or three weeks. I then gradually reduce the number of irrigations, dropping to one a day, and then one every other day, until finally all treatment is discontinued. Although no visible discharge is present, I do not consider the patient cured so long as large heavy clap threads are seen in the urine. When "tripper-faden" are numerous and sink in the urine, I do not consider the patient cured, but continue treatment until such are either absent or else light or mucoid in character, floating in the urine.

In cases which continue to pass the second or third week, our best results are obtained by irrigating with some astringent. In acute cases, potass, permang. in our best remedy, but when this fails I resort to hot bichlor. flushings, 1 to 50,000 strength, gradually increasing to 1 to 20,000. If this does not succeed, I resort to astringents; the best being argent. nit., in strength 1 to 10,000, gradually increasing to 1 to 5,000 strength. If this fails, I resort to flushing with zn. sulph. in the same strength.

Cases that resist treatment past the sixth week; are nearly always posterior in

character, so I will not consider such cases under the head of anterior urethritis.

When the disease becomes chronic and posterior, I still continue the irrigations; the best being solutions of nit. silver, bichlor. mercury, sulph. zinc. The silver and zinc solutions are used in 1 to 10,000 strength, gradually increasing the strength, using the sensibility of the urethra and the inflammatory reaction as indices as to the rapidity with which the strength of the solution should be increased. I discard in these cases the two-way nozzle, and use the single, first flushing out the anterior urethra and then pushing the nozzle firmly into place allowing the fluid to gradually distend the anterior urethra until the compressor urethra muscle is overcome, the fluid then flows through the deep urethra into the bladder. So soon as the patient feels a desire to urinate, he does so, thus giving the urethra the double benefit of the antiseptic fluid as it passes from the bladder. One to two quarts of the above solution are used at one sitting. If the disease does not yield in the first few weeks of treatment, I resort to instillation of 2 per cent. nit. silver through an Ultzman's deep urethra syringe, and drop in a graduated steel sound every third day. Under this treatment chronic urethritis will yield in time. It is rarely necessary to resort to endoscopic treatment.

The advantages for Halsted's method of treatment are as follows, viz.:

a. It does not necessitate the introduction of any instrument into the urethra; therefore all risk of further infection and injury to the urethra are avoided.

b. By the hydraulic pressure, it "balloons" out the urethra, (this cannot be obtained by other methods of irrigation,) thus bringing the antiseptic fluid into more intimate contact with the diseased surface.

c. By this method the surgeon remains master of the situation, not intrusting the treatment in the patient's hands, until he has learned by frequent visits to the physician's office just how to use it himself. This is not the case when a small syringe is put in the patient's hands when not sufficient instructions have been given him for its proper use by the physician.

d. This method is cheap and simple, and can be carried out by an intelligent patient at his home after he has learned its proper use; while other methods of irrigation would not be safe in a patient's own hands.

In all acute cases of urethritis, hygienic and internal treatment should be considered. In reality only local and hygienic treatment is considered here, for all curative drugs, when given internally, only exert their influence because they are eliminated

in the urine and act locally on the urethra by their antiseptic and stimulating properties. Chief among these are the well known remedies, viz.: Copaiba, cubebs, oil of santalwood, salol, boric acid. These drugs aid in relieving symptoms and in hastening cure, but after a prolonged and thorough trial, I am convinced that they will not cure the disease, *per se*. My favorite prescription is one recommended by J. William White, as follows:

Balsam copaba,	mn. x.
Oleo resin cubebs,	mn. v.
Salol,	gr. v.
Pepsin,	gr. i.

M. et. ft., capsule No. 1.

In the beginning of the attack, I use one of these capsules three times a day, discontinuing the treatment, however, with local irrigation if any complication develops. As inflammation subsides, I double the dose and continue for a week or ten days, until all inflammation and discharge has disappeared. I also make use of the oil of santalwood, combined with copaiba and oil of cinnamon, or one may use powdered cubebs in dram doses, t.i.d., increasing the frequency of the dose as the inflammation subsides. Powdered cubebs is very efficient in controlling the discharge, but like all internal treatments will not cure the disease unless used in conjunction with irrigation. These drugs must not be used with a view of curing the disease in a short time. Gradual and persuasive methods of the treatment gives us our best results.

The most important principle, from a hygienic standpoint, in the management of acute urethritis, is the maintenance of physical and sexual rest. Too great stress cannot be placed on this point. When possible the patient should be put to bed, just as in any other illness. When my patients refuse to go to bed, I insist upon them wearing a suspensory bandage from the beginning of the attack, thus lessening their chances of epididymitis, the one complication which we must be always on the lookout for.

Gonorrhea patients should be cautioned against indulging in certain articles of food and all alcoholic drinks should be prohibited. We should insist upon them drinking freely of water and milk, and in all cases where ardor urinæ is severe, alkaline waters should be freely used, together with anaphrodisiac remedies, viz.: The bromides, hyogiamus, atropine, chloral, morphine, &c. These, as a rule, should be given at bedtime in large enough doses to control pain, but if necessary they can be given in small doses during the day.

Absolute cleanliness and proper dressing

of the penis should be insisted upon. The patient should be given a wash of saturated solution of boric acid, and instructed to cleanse his penis with it thoroughly several times a day. Patients with a long prepuce should be particularly cautioned to expose the glans and cleanse the parts thoroughly several times daily.

I have now about one hundred specific cases on my private case books. In some cases the discharge has been successfully checked after the third days treatment; in others it has taken eight weeks to effect a cure; some came to me in the beginning of the attack, others after the disease had become chronic and posterior, and had been unsuccessfully treated by other physicians. I find that the average time that it takes to bring about a cure by the treatment advocated in this article, in both acute and chronic cases, is twenty-four days; the results which are superior to those obtained by me when I followed older methods of treatment.

Diphtheria.

By T. T. Ferree, M.D., Ashboro, N. C.

Diphtheria, says Holt, may be defined as an acute, specific, communicable disease due to the bacillus of Klebs and Leoffler. It is usually characterised by the formation of a false membrane upon certain mucous membranes, especially those of the tonsils, pharynx, nose or larynx. Bishop, Smith and all who have recently written upon Diphtheria agree as to its origin and nature of the trouble.

I do not propose in this paper to tax your patience with the fine spun theories of certain characters, neither do I propose to tell you all about diphtheria, but I have endeavored to boil down my remarks to practical suggestions. Is diphtheria a local or a constitutional trouble? I answer it is both. Primarily it is local; secondary, it is constitutional. How long may it remain local? That depends upon the extent of the infection. The infection may be so slight that there may not be any symptoms of constitutional involvement. To be able to recognize the approach of diphtheria is a very fine point in diagnosis. The very best of diagnosticians are liable to be mistaken since the trouble is capable of attacking in various ways. I am glad that all the sore throats we meet with in our practice are not diphtheria. There is an ulcerated condition of the throat that bears no relation to the specific trouble.

Tonsilitis is often taken and treated as a case of diphtheria, but a few hours gener-

ally set us right in our diagnosis. There is also a catarrhal condition about the throat, possibly the result of cold, may cause us to make a false alarm and cry out diphtheria! In diphtheria there is usually a false membrane formed in some part of the throat, or upon a denuded surface. However, this is not absolutely necessary, for genuine cases have occurred in which there was no formation of any false membrane. The false membrane does not always confine itself to the region of the throat, but any abrasion upon the skin from the nose to the big toe may become fertile soil for the bacilli of diphtheria. I want to emphasize the characteristics of the exudation of diphtheria. Any one who has taken pains to examine with care the false membrane knows well that it is unlike the formation of any other exudate. It appears in the great majority of cases first upon the tonsils usually as a gray film, which gradually becomes more dense, and white, and often has the look of being plastered over. As time goes on the membrane becomes gray, greenish yellow, brown and sometimes black.

The germs of diphtheria do not enter the circulation, but they produce a toxin that does, and it is to this poison that the toxemia is due. There are certain well defined conditions you may always look for in diphtheria. The first to which I invite attention is that of great anemia. The red blood cells are rapidly diminished in number, and along with their destruction comes great prostration and depression. Another condition and one to be dreaded most is that of heart failure or heart paralysis. The intense toxemia which is always present in serious cases of diphtheria attacks the heart muscle, and through its processes of degeneration produces great weakness, and therefore heart failure may be expected at any moment. The symphotic system, like a sponge, readily takes up the toxic infection, and as a result of the absorption you will find great swelling of the cervical glands.

I want to speak briefly of the prognosis of diphtheria. Here we must be very guarded in what we say, as danger threatens our patients from so many sources, however, with more scientific remedies and better facilities the prognosis should be more favorable. In some epidemics nearly all get well, while in other epidemics nearly all die. The treatment of diphtheria has been a grave question, and is still one of fearful moment to the medical profession. Specific after specific has been discovered, and still they die.

Now, gentlemen, I want to tell you not how other physicians treat the trouble, but

how I treat it, and if my experience and observation are worth anything to you you are welcome to it: When called to see a patient suffering from suspicious symptoms I examine with care both the inside and outside of throat, and also all abrasions upon the skin should there be any. If I find a reddened irritated condition and congestion of the throat with a thick film of a catarrhal nature beginning to form on tonsils and surrounding parts difficulty of deglutition, with some glandular swelling, said condition as described attended with elevation of temperature, I give my patient the benefit of a doubt, and put him immediately upon diphtheritic treatment. The treatment is both local and constitutional. The local treatment consists of gargles, inhalation of steam, and the topical application of medicines to the diseased parts. What shall we do with the false membrane in the throat; should there be any force used in its removal? No, not unless by its mechanical presence it threatens life.

Dr. William C. Wile, of Mississippi, several years ago began the use of sulphocalcin as a solvent of the exudate that formed in the throats of his diphtheritic patients and was much gratified at the success that attended the topical application of the remedy. Bishop says he confirms Dr. Wile's statement of the solvent properties of the remedy. I think the medicine is worthy of an honest trial. Unless the topical application of some medicine will dissolve the exudate, and thereby cause its removal, it had better remain undisturbed, as it will in a very short time return.

There are two reasons to my mind why the false membrane should not be interfered with. The first is, when any force is used in its removal you will have a fresh bleeding surface, which will invite the diphtheritic germs at once. The second reason is that the bacilli do not reside in contact with the mucous membrans, but in the upper strata of the exudation, and hence away from the greatest point of danger to patient. The inhalation of steam from boiling water with the addition of a few drops of turpentine will be quite soothing to patients from diphtheria. Shaved ice will come in for its part of comfort to diseased throats.

I often use as a local application to outside of throat equal parts of sweet oil, spt's. camphor, and about 1-4 as much of turpentine, and always remember not to produce any abrasion of skin, as diphtheria might follow.

I want now to consider the constitutional treatment, and notice the indications as

they present themselves. We are met in the very beginning of the disease with great *anemia*. Millions of red blood cells are attacked by the germs of diphtheria, and utterly destroyed, and to meet and successfully overcome this invasion upon human blood, I know of nothing better than to saturate the life fluid with iron and quinine. For a child, say from 3 to 5 years old I give the following:

Rx.	Quinia sul. grs.	xxx.
	Mur. tinct. iron,	3j
	Chlor. pot.,	3j
	Syr. simplex,	3iv

℞. sig—teaspoonful every 2 to 4 hours.

This Rx. has always served me well, and has met the anemic conditions, held up my patients better than anything else I have ever tried. We must remember how apt the heart is to suffer from the infection, and guard its muscular structure with great care. The toxic infection spends its greatest force upon the heart muscle, thereby producing degeneration and great weakness, so that heart tonics are called for from the very inception of the disease. This indication is best met with strychnine and digitalis. Some prescribe some form of alcohol, but for my life I cannot see the propriety or the necessity for so doing, since science has demonstrated the fact that alcohol is neither food nor medicine; and hence it cannot occupy any place in the economy except that of an irritant and paralyzant. I have no quarrel for those who prescribe it, but for my own use I would not give one grain of strychnine for a car load of the stuff.

I want to in conclusion pay my respects to the serum therapy. This is quite a change from the old way of treating diphtheria, but the scientific elements developed and brought out in the new plan have undergone the most crucial tests, and the wisdom of the departure from the old plan is impressing the medical profession everywhere. Since the introduction of antitoxin the mortality of diphtheria has been greatly reduced. The German physicians claim great success with antitoxin when used early in the disease. The antitoxin treatment is destined to become more popular, and will be more generally adopted by the medical fraternity, since it offers the greatest hope to diphtheritic patients of any remedy known to our profession.

"Say, pa!"

"Well, what?"

"What did the Dead Sea die of?"

Esophageal Stenosis and Its Surgical Treatment, with a Report of a Number of Cases.*

By James G. Hunt, M. D., Utica, N. Y.
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The line which separates health from disease is not always to be determined when certain tissues or organs have increased in size or have undergone structural changes disproportioned to the rest of the body. The exclusive study of morbid growths, according as they affect internal or external parts, has led to limited views of the subject. Exercise within certain limits may cause the size of particular parts to be relatively increased, as the arms of the prize fighter or the legs of a circus performer. In these cases, however, such enlargement is consistent with health.

We recognize that the departure from the normal type is absolutely necessary, for the purpose it is required to carry out; and when this is accomplished, it returns to the natural condition.

In like manner other hollow viscera enlarge when they have an obstruction to overcome. No tissue or organ of the body is exempt from more or less increase of its extent or magnitude, and there are none consequently, which may not occasionally present morbid or excessive growth.

Increased growth of tissues may assume various forms.

The organ or structure may gradually become enlarged in whole or in part, still maintaining more or less of its original texture, shape and function constituting hypertrophy. Membranes may become preternaturally thickened, causing more or less induration, whereby the movements of the parts may be affected, or the calibre of tubes and ducts may be diminished, producing stricture.

The results of the healing process may give rise to new tissues, exactly resembling those previously existing in other parts of the body, as in cicatrices, callus, etc.; such growths may assume the form of a tumor.

Narrowings are the most frequent and clinically the most important of the affections of the esophagus.

Under the head of stricture belongs all those stenoses which are caused by such a change in the wall of the esophagus, as en-

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tirely destroys or greatly limits its power of distention. Here the stiffness of the wall during the act of deglutition has an effect as if an unyielding hand surrounded it, and so in this wise is practically a stricture, whether any contraction has occurred or not. Changes of this nature may be either *contracting*, *cicatrices* or cancerous degeneration, and the consecutive muscular hypertrophy which may accompany stenosis arising from any cause whatever.

Strictures pure and simple are best represented by the cicatricial, i. e., those which remain after healing of a loss of substance or solution of continuity arising from any cause, when the cicatrix has undergone contraction.

Relatively the most frequent and also the most severe are those strictures which sometimes remain after the destructive action of corrosive substances, such as the concentrated mineral acids, particularly sulphuric acid and caustic alkalies.

And yet, since these substances usually cause death, even strictures from this cause are very rare, and these vary in their character according to the depth to which the loss of substance has extended. If the muscular layer is partially or totally destroyed, we then shall have a dense callous, cicatricial tissue, the contraction of which produces the most obstinate strictures, (callous stricture).

Even when the muscular layer is preserved, the quickly developed hypertrophy serves greatly to increase the stiffness of the wall, to make it unyielding, and so increase the stenosis.

With the exception of the pharynx (behind the cricoid cartilage) these strictures, according to the best of authority, occur most frequently in the vicinity of the cardiac orifice, or even in the muscles which guard that opening itself.

The signs and symptoms, therefore, manifested with any deviation from the normal standard peculiar to each individual at once suggest of an abnormal change which may point to both organic as well as functional, but not strictly so.

Since I have limited my paper to organic, cicatricial stricture of the esophagus, and purely to cases which came under my medical observation, I shall not dwell upon the neurotic form, excepting from a diagnostic standpoint.

Only one case in all has been reported by Dr. Wilks as a supposed congenital stricture of the esophagus (Guy's Hospital Report, 1871-72, Vol. 17).

The hysterical esophageal stenosis is purely of a neurotic nature, and is differen-

tiated from the organic form without difficulty.

Now in order to demonstrate the most common seat of an esophageal stenosis, and the accompanying symptoms, a brief description of the topography appears to be inevitable.

The esophagus is a hollow musculo-membranous canal, about nine inches long, joining the pharynx above and the cardiac end of the stomach below. It commences at the lower border of the cricoid cartilage, passing through the esophageal opening of the diaphragm, to terminate at the cardia, opposite the ninth dorsal vertebra; in the neck it lies between the trachea and the spinal column and longus colli muscles, at the lower part inclining to the left, having on either side the common carotid artery, with the lateral lobes of the thyroid gland, the recurrent laryngeal nerves ascend between it and the trachea.

A very important point to be remembered is that the esophagus belongs to both the respiratory and the digestive tracts, although it is commonly described as a part of the latter; its upper portion is exclusively connected in the act of respiration, while the lower region participates in both functions.

Cicatricial stricture of the esophagus may result from any disease or injury in which ulceration is followed by healing.

The most common cause of such contractions is probably to be found in the swallowing of weak alkaline solutions.

Leroux, of Paris, mentions a case in which the stricture was caused by the swallowing of a very hot liquid containing a piece of leek.

A very interesting case was reported by Dr. Kendall Franks, in the "Medical Press and Circular of London," a number of years ago, in which the stricture was produced by a hard piece of bread crust. When the patient was first seen, who was a young lady of about twenty years of age, the condition had existed for over four years and a half; there was no evidence of hysteria; and he was of the opinion that it was due to cicatricial thickening where the parts were injured by the ragged edge of the bread crust at the time of the accident.

Stricture also very frequently results from the inflammation following mechanical irritation; or scalds received in swallowing hot fluids, or hot solid food; or caustic substances.

The most common seat of this form of stricture is at the upper part of the esophagus, this being the narrowest portion of the tube in its normal condition: or it may form at the lowest portion of the pharynx, just behind the cricoid cartilage, because these

are the areas most accessible to mechanical injury, burns and scalds.

Occasionally the stricture is the result of acute or chronic inflammation of a spontaneous origin.

It may also be produced after the existence of some of the infectious fevers, such as variola, diphtheria, etc.

The stricture is not infrequently due to disease involving the submucous connective tissue, sometimes even the muscular portion of the tube.

In cases which are not cancerous the diminution of the calibre of the tube is usually due to submucous fibrinous deposit and subsequent organization, thus causing thickening or contraction of the mucous membrane.

Stricture of the esophagus is occasionally congenital, as before mentioned, and under such circumstances would be necessarily fatal. Sometimes the immediate cause of the stricture is unknown, and it is, therefore, ascribed to a neurotic origin.

Another variety of esophageal stricture is due to varicose veins. Dr. Janeway reports a case to the Practitioner's Society of a man of fifty years of age, who had several attacks of hæmatemesis and also hemorrhage from the bowels. It was supposed that he had an ulcer of the stomach.

Death from exhaustion and sepsis at the end of two weeks, and at the autopsy varicose veins as large as a man's finger were found in the esophagus, extending four inches above cardiac orifice of stomach. An opening into one of these veins, large enough to admit a number ten sound, was found and it contained a septic clot. Stomach normal. No cirrhosis of liver. There were twelve cases at the time of this autopsy.

The symptoms of cicatricial stricture:

In cicatricial stricture of the esophagus the characteristic symptom is dysphagia; it varies in degree according to the narrowing of the canal.

Sometimes the actual constriction may be slight, however, deglutition is rendered difficult or impossible by superinduced spasm.

When the contraction results from the swallowing of a weak caustic or irritant solution, there is generally at the primary stage an acute inflammatory period during which there is painful deglutition.

These symptoms persist as long as the ulceration continues, but when the ulcer heals the patient can usually swallow with ease and for some time may consider himself cured.

At the end of a few months, however, owing to the increasing contraction of the tissues forming a cicatrix, difficulty in swallowing is again experienced.

From this period the dysphagia grows steadily worse; and if not relieved, is most likely to prove fatal.

DIAGNOSIS.

As to diagnosis: The location of the stricture may be determined by the passage of a bougie or by auscultation.

On placing your ear or stethoscope over the course of the esophagus posteriorly it will be noticed that fluids pass at the ordinary rate and give rise to the normal sound till they reach the upper part of the stricture, when the fluid is partially arrested, and a gurgling or trickling noise is heard below the point of obstruction.

The latter may be observed to continue for four or five minutes after a mouthful of fluid has been swallowed.

In introducing the bougie, the instrument is either arrested at the point of obstruction or is passed beyond it with difficulty, sometimes a second stricture may be found lower down. A number of cases have been reported where even three strictures were present.

The topography of the esophagus is of considerable practical interest to the attending surgeon from a diagnostic standpoint, as he is required in a large number of cases to dilate the canal by a bougie when it becomes of importance to know exactly the direction of the esophagus, and its relation to the surrounding parts should be remembered.

In cases of malignant disease of the esophagus, where its tissues have become softened from infiltration of the morbid deposit, the greatest care is requisite in directing the bougie through the strictured part, as a false passage may easily be made, and the instrument may pass into the mediastinum, or into one or the other pleural cavity, or even into the pericardium.

The surgeon should also bear in mind that permanent contraction of the esophagus and consequent symptoms of stricture, are occasionally produced by an aneurism of some part of the aorta pressing upon the tube.

In such cases the passage of a bougie could only hasten the fatal issue.

Inflammation of that portion of the pharynx which cannot be seen when the tongue is depressed is rare.

It is quite certain to exist if there be pain and an impediment in the act of swallowing when the food arrives at that point opposite the superior and posterior border of the larynx; while the respiration remains free and the voice not affected.

The esophagus is not very often the seat of disease. We sometimes meet with acute

inflammation of this division of the alimentary canal produced by the swallowing of boiling water or corrosive poisons, especially nitric, sulphuric and muriatic acid, or strong alkaline solutions such as ammonia.

There is very little trouble in diagnosing a cicatricial stricture of the esophagus; the patient will complain of more or less difficulty of deglutition, which in severe cases amounts to complete inability to swallow.

This is sometimes attended by spasm, regurgitation of food, oppression of the respiratory organs, pain in the parts, and more or less nervous distress.

There will be more or less general ill-health from insufficient nourishment, and oftentimes there are more or less severe pain complained of in the region of the sternum, stomach or cervical vertebrae.

The diagnosis is confirmed or disproved by the passage into the stomach of gum elastic bougies, or esophageal probes consisting of olive shaped masses of gutta-percha, ivory or steel, and affixed to stout whalebone or steel rods.

Commencing with one of the smallest bulbs, the instrument is carried through the stricture, if possible, and the length of the constriction is judged of by the distance along which the resistance to the passage is felt, the size of the largest bulb which can be employed; and its consistence by the amount of resistance offered to the passage of the exploring instrument.

The instrument after passing a stricture should always be carried down into the stomach in order to ascertain whether there be any more strictures further down the esophagus.

It is necessary that great care should be taken in the passage of these instruments, on account of the probable existence of a pouched condition of the adjacent parts immediately below the seat of the stricture, into which the instrument may glide.

An experience that I have often met with and through which it may be thrust by the employment of an undue amount of muscular force.

In case the stricture is quite small and pouched at its side, the use of a conical wax bougie with the tip bent forward is recommended as more likely to pass the stricture than a straight bougie, which would be apt to be caught in the sac.

The symptoms of acute esophagitis are usually confounded with those of inflammation of the pharynx or of the stomach.

We may be quite sure of its presence if difficulty and pain in deglutition exists for which nothing in the throat can be found to account, and if these symptoms be associated with a hiccough and a burning sen-

sation between the shoulders and in the course of the tube.

Stricture is, beyond doubt, the most common of the chronic diseases of the esophagus.

The narrowing may take place at any part of its length.

The constriction results from preceding inflammation or ulceration, from cancerous degeneration of the walls of the tube, or from the pressure of a tumor or an aneurism.

The disease manifests itself by a difficulty in swallowing, even liquid food cannot pass without great distress; and if the stricture goes on increasing the death of the patient by starvation is certain to follow.

Together with the obstruction of the passage of the food, we may have very severe pain complained of and occurring at a particular part of the tube, and also raising clots of blood without cough or vomiting.

The matter ejected in the attempts at deglutition consists of masticated food together with some mucous.

If on the introduction of a small bougie, resistance is met with, and dysphagia is present, there is nothing more certain about it than an organic stricture exists.

The narrowing may be simply spasmodic, yet give rise to all the symptoms of an organic constriction; but they are not permanent as I remarked above, and at times nourishment is readily swallowed, and a full sized bougie passes the constriction with the greatest ease.

This singular disorder is occasionally sufficient to be accompanied by ulceration of the larynx; this is chiefly met with in hypochondriacs and hysterical women.

In traumatic cases the diagnosis presents but little or no difficulty; the history of a caustic or irritant solution having been swallowed, or any form of trauma produced by mechanical irritation at once removes all doubt; in very rare instances where the temporary lodgment of a foreign body, or the fact of an irritant having been swallowed months ago has been forgotten, or when an insane person is the subject of the stricture that any doubt can arise.

Under all circumstances it will be necessary first to determine whether the difficulty of swallowing be due to *stricture* or compression of the esophagus; and, secondly, in the event of the affection being intra-esophageal, to eliminate the various other diseases of that portion of the canal.

In cases of compression, the difficulty of swallowing, though considerable, is seldom so marked as in cicatricial stricture, except in certain rare instances of excessive fibrous or cancerous enlargements of the thyroid

gland or of a tumor in the posterior mediastinum.

In aneurism of the aorta and enlargement of the cervical or bronchial glands, as well as in peri-esophageal abscess, the difficulty in swallowing is seldom so constant or severe.

The only diseases of the esophagus which require to be differentiated from cicatricial contraction are cancer and simple stenosis.

Cancer may be diagnosed by its occurrence in persons over forty years of age, and by its progressive character.

The special characteristic of true cicatricial stricture, on the other hand, is the peculiar nature of the dysphagia, that is to say, its primary occurrence, its disappearance, and its subsequent return in a more severe and intractable form.

In cases of *simple stenosis* there is a history of difficulty in swallowing from an early period of life, and the symptoms are not progressive where the cicatricial stricture results from the healing of an ulcer caused by disease, a clear history of the previous existence of the complaint is in itself enough to establish the diagnosis.

PATHOLOGY.

Cicatricial stricture is most often found at the junction of the inferior end of the pharynx, or near the cardia. This may be explained by the fact that both locations are controlled by entrance orifices, the upper one by striped muscular fibres, and the inferior by the circular fibres forming the orifice of the cardiac end of the stomach; though it may occur anywhere in the tube; a point at a level with the diaphragm being a favorite intermediate position.

The single form is most common, but it may be multiple.

It may be longitudinal or angular, and may involve the entire length of the esophagus.

The traumatic form of esophageal stenosis nearly always assumes quite extensive dimensions, two to three inches of that organ. It may involve its entire length, and in exceptional cases the entire organ representing a fibrous cord.

But the walls of the esophagus are invariably indurated, because of the existing chronic inflammation, and organization of new fibrous tissue by the proliferation of the connective tissue cells and leucocytes, thus the lumen of the canal is narrowed according to the degree of thickening or contraction.

The mucous membrane undergoes considerable change in appearance; it becomes greatly infiltrated and is covered with a tenacious matter consisting of decomposed

epithelium and mucus; sometimes long vertical folds are met with; also transverse bands are formed.

As a rule cicatricial stricture, particularly the circular form, is accompanied by dilatation above the seat of that lesion.

PROGNOSIS.

It may be laid down as a general rule that cicatricial stricture is always attended with considerable danger, and not only is it often exceedingly difficult to effect a dilatation, but even in cases where some degree of expansion has been produced, subsequent recontraction is likely to take place, unless the use of bougies is regularly persevered with for a reasonable length of time.

Many instances of cure have been reported.

Kellar reports thirty-five cases, of which twenty-three were cured, seven benefited, five died; but many of these cases were rather due to inflammatory thickening or induration, than to cicatrization.

Wolzendorf reports seventy-five cases, twenty three of which proved fatal.

TREATMENT.

The treatment of stricture of the esophagus resolves itself into (1) attention to the general health, (2) mechanical or operative measures for the removal of the constriction.

A case of stricture usually requires very protracted treatment varying from six to eight months on the average, and even longer than that.

Marshall Hall, the celebrated English physiologist, fell in this slow way a victim to a stricture of the esophagus, with ulceration of a dilated sac of the pharynx and the esophagus above the seat of the stricture.

Rectal and endermic feeding should be practiced to their limit.

Pain should be relieved by hypodermic injections of morphia.

The medical treatment of this condition as claimed by great authorities, such as Gross, Pancoast, Sir Morrell Mackenzie, Charles Bell, Cumin, Dewar, Kellar, Wolf, Bayle, Kendall Franks, Keen, and many others, is of little use; but from statistics surgery claims many cures.

More often, however all that can be done is to prolong life.

As to mechanical measures which may be most practical are surgical attempts to provide an artificial opening through which food may enter the stomach.

Of the number of methods that have been used to combat the local condition are: (1) *Gentle dilatation*; (2) *forcible dilatation*; (3) *internal esophagotomy*; (4) *external*

esophagotomy; (5) *esophagostomy*; (6) *gastrostomy*.

Of the first method, *gentle dilatation*, by which a large number of cures have been reported, but it is obvious that its success is likely to be greatest where the disease is slight and recent, and more especially in those cases which though originating in the same as true cicatricial stricture, and scarcely to be distinguished therefrom in their clinical history, strictly belong to the class of simple indurations.

Dilatation is best effected by passing bougies of gradually increasing diameter every two or three days until the full calibre is reached.

In passing the bougie, and just at this point, I may say I do not wish it to be understood that I am here for the purpose of trying to instruct the medical gentlemen present, the mode of using the instruments in the treatment of these cases, but my paper would not be complete unless I should include the treatment and in so doing I am simply following out the methods of procedure of the most eminent men of the day in the medical profession.

The bougie to be passed should be dipped into hot water and allowed to cool to the temperature of the body; or in glycerine; olive oil is oftentimes very disagreeable to some patients.

Some recommend a gum-elastic bougie, slightly bent at about an inch from its extremity, so that when it is introduced into the throat the point of the bougie presses slightly by its own elasticity against the posterior wall of the pharynx and is thus not likely to enter the larynx.

The patient should sit with his neck stretched out, and his head thrown slightly back, while the operator standing in front depresses the tongue with the forefinger of the left hand, inserts the instrument in a slanting direction against the middle of the posterior wall of the pharynx at the lowest part.

In introducing the bougie, about four inches of its length should extend beyond the hand, and it should be pushed slowly and gently down the throat.

When the instrument has entered the esophagus, if the patient will bend the head a little forward and perform the act of swallowing, it will aid the operator materially in passing the bougie; should any obstruction to its course be encountered, the instrument should at once be withdrawn, and again passed into the throat.

If on the second attempt you meet with the same obstruction at the same point, and after using very gentle pressure and manipulation fail to pass it beyond the obstruc-

tion, it should be withdrawn and a bougie several sizes smaller introduced.

Should the bougie be found to pass the point, it should be pushed steadily downward until it reaches the stomach, as a second stricture sometimes exists, and even a third below the second.

On withdrawing the bougie the distance from the patient's teeth to the terminal end of the bougie should always be measured.

The distance from the incisor teeth to the superior end of the esophagus varies from 15 to 17 centimeters, or about $6\frac{1}{4}$ to $6\frac{3}{4}$ inches, and in estimating the situation of an obstruction this length must be deducted from the length of the bougie passed into the body.

As the passage of the bougie often provokes coughing and a considerable flow of saliva and mucus, the patient should bend forward in order that it may fall into a hand basin.

The bougie should be, if possible, left in a position on the first occasion for at least five minutes, and as he gets accustomed to its presence he may be able to keep it there for ten or fifteen minutes or even longer.

It is not advisable, as I have said before, to repeat the operation oftener than two or three times a week.

The same size bougie should be passed on at least two and it is generally better to use it three or four times before a larger size is employed.

Some surgeons, after withdrawing a bougie, immediately afterwards try to pass a larger size, under the impression that an instrument of greater size can by this means be more easily made to traverse the stricture.

This method of procedure is apt to give rise to a greater amount of congestion, which renders it difficult to introduce a second larger size at the same sitting. An experience that I have often met with.

I have been in the habit of using a whale-bone bougie, but for fear of its breaking near the bulb and puncturing the wall, I have used for the last year or more a steel spiral bougie. I sometimes cover it with a thin elastic tubing to prevent too great an irritation to the sensory nerves which are distributed to the mucous membrane of the esophagus.

Forcible Dilatation.—Another instrument used for the mechanical dilatation of stricture is a cylindrical metallic tube which by a mechanical arrangement externally, can be gradually widened after its introduction, this mode of treatment is very rarely to be resorted to.

Internal Esophagotomy.—This procedure is justifiable in cases of organic stricture

which will not yield to careful and persistent efforts to dilatation.

In performing this operation the esophagotome of Prof. Sands should be preferred.

It is introduced with the blade concealed, and when the portion of the instrument containing the knife is felt below the stricture, the blade is to be made to project and by a rapid upward movement of the instrument the obstructing band should be cut through.

If necessary two or three incisions may be made.

About five or six days after the operation a medium size bougie should be passed to counteract the tendency of the divided tissues to shrink in healing, and instruments of gradually increasing size should be used from time to time.

Of seventeen cases reported by one author four died.

From an examination of the results of the published cases of internal esophagotomy, it does not appear to be a very satisfactory operation.

The actual danger attending the performance of the operation is far from being a trifling one.

The thinness of the esophageal walls and the close proximity of many of the blood vessels and nerves constitute dangers which cannot be ignored.

External Esophagotomy.—In this operation the canal may be opened either at the seat of the stricture or below it.

The incision which is about four inches in length, is made on the left side of the neck on account of the inclination of the esophagus to that side, from the thyroid cartilage downwards, dividing the skin and platysma,

The opening or incision is between the larynx and trachea on the inside and the sheath of the vessels externally.

The disadvantages are first owing to the depth from the surface at which the canal is situated, and the fact that when diseased it is often fixed to the surrounding parts; the operation is a very difficult one.

There is great danger of cutting important structures as large blood vessels and nerves of the neck, and the thyroid gland which is not infrequently enlarged in esophageal stenosis.

This operation is practiced not only on stricture, but for the removal of foreign bodies; when done for the purpose of making a fistulous opening for the introduction of food, the operation is known as *esophagotomy*.

In the New York Medical Journal of 1894, Mayo reports a case of a child three

years old laboring under a stricture of the esophagus.

After the performance of a gastrotomy the cardiac orifice of the stomach was sought with the little finger, but this caused so much gastric disturbance and leakage that it was determined to wait.

A month later, esophagotomy was performed low down. A probe was passed by way of the stomach through the obstruction and out of the wound in the neck.

A double strand of braided silk was fastened to the probe and drawn through the channel.

Another strand of silk was used to cut the tissues by the ingenious straw-saw method of Abbe of New York, while the second strand was used to keep the stricture tense.

The stricture was cut and the opening greatly enlarged.

During the succeeding month, at intervals of a few days, this process of division was carried on, and perforated shot clamped on the thread wire drawn through to aid dilatation; bougies were afterwards passed and the fistula in the neck was allowed to cicatrize.

Gross reports five cases of esophagotomy of which two survived the operation for five months and seven months, respectively.

As the only means of averting death, even for a time, it may, if undertaken early, become a valuable addition to the resources already named.

Gastrotomy.—This has proved to be the most practical of all the operations recommended for the relief of esophageal stricture, aside from dilatation.

Gastrotomy was first performed by Sedillot in 1849.

The operation consists of making a permanent fistula passing into the stomach for the purpose of habitually introducing food.

In some cases food is taken into the mouth and masticated, then forced directly from the mouth through a tube into the stomach.

These are three useful and reliable methods of gastrotomy: 1. Witzel's method. 2. The old method of Fenger. 3. Frank's method.

In performing this operation Witzel's method is considered by many of the leading authorities the best. This was first published in 1891.

In this operation an opening is made into the abdomen so that the fistula extends through the rectus and transversalis muscles, the fibres of which run at right angles to each other, and may be expected to contract more efficiently than with the rectus alone.

In Frank's operation a cone of the stomach is brought up through what is call-

ed Fenger's incision and a bridge of the skin, to a point above the border of the ribs where it is fixed with sutures, and a small opening made, so as to allow a tube to be inserted.

Two long, stout ligatures are passed through the portion of the stomach, that projects through the wound, for the purpose of facilitating the making of a subsequent incision into the stomach, (which is done from three to eight days later, or after the first operation).

And also as a precaution against the tearing out of the stitches, if the patient vomits, and finally for the purpose of facilitating the return of the stomach into the abdominal cavity.

The Fenger's incision above spoken of is the one which has been employed most frequently; this incision is from three to four inches in length and is made to the left of the rectus muscle on a line below and parallel to the left costal arch.

The fistulous canal passes through the abdominal wall in a curved direction.

CASE 1.—About the middle of April, 1896, I was called to see a Mrs. L., age 52, who consulted me on account of a difficulty of deglutition.

This symptom was first noticed by her about the 6th of February of the same year, at which time she thought a bone had lodged low down in her throat while eating some meat. She felt quite a little inconvenience from it for two or three days, and that feeling gradually passed away.

She then commenced to have spells of nausea and vomiting which, at intervals, continued for about ten days.

She was then comparatively free from that disagreeable sensation in her throat for about two weeks, when that irritable vomiting as well as dysphagia recommenced and grew gradually worse.

I was called about seven weeks after, up to which time she was under the care of another physician.

She had been then two days without eating a single morsel of food or drinking anything, until she felt, as she expressed it to me, that she was "actually starving."

After I made a thorough physical examination of my patient, and repeatedly attempted to pass the smallest size bulb bougie which failed to pass the constricted portion, I was rather inclined to give it up, when on another and last effort I succeeded in forcing it through the constriction, and I recognized it as a stricture of the esophagus, and from the history of the case I concluded that it was of a fibrous or cicatricial nature and not malignant.

I am at a loss to know whether there

is any family history connected with cancer, although there have been cases of cancer of other organs, but not in the immediate family.

I have continued the use of the bougies from that time to the present at intervals of from three to six days; recently I have used them about once in two weeks, and I can now introduce the largest size bulb of the lot with very little difficulty.

The location of the stricture is about $6\frac{1}{2}$ inches (or $16\frac{1}{2}$ centimetres) from the teeth to the thickest part of the stricture, with a depth of 2 3-16 inches (or $5\frac{1}{2}$ centimetres), the narrowest point of the stricture being $\frac{5}{8}$ to $\frac{7}{8}$ of an inch.

Of the six other cases that I have had within the past eighteen years of my practice the histories I can give but very little about as I could not obtain them.

CASE 2.—The second case was a young lady about 24 years of age, a tailoress by trade. I only saw her two or three times. She objected to the use of the bougies, and for that reason I was unable to render her any assistance whatever.

She died in the course of a few weeks from the time I last saw her.

CASE 3.—The third case that I had was a photographer who I treated some little time with very good results by the use of the bougies. While under my care he moved to Chicago.

CASE 4.—One of the next cases was a wool sorter by trade, and in getting a history of his case, he said the only cause he could attribute to his condition was that a tick got into his throat from off the wool while sorting, which set up an irritation and was followed by the disease that he was suffering from.

He left the city while under my treatment very much improved, and that was the last I ever heard of the case.

CASE 5.—A Mr. S—, age 38, came to see me about nine years ago. He worked in a shoe factory.

He complained of a great difficulty in swallowing, more so sometimes than at others. On examination I found that he had a stricture of the esophagus. He improved under the use of the dilators, and was able to take solid food in small quantities up to the time I last saw him, after which he moved to Philadelphia. How the case finally terminated I never learned.

While working at his trade he was in the habit of putting a small handful of tacks into his mouth. At one time he swallowed one and he felt it scrape his throat as it went down, as he expressed it, but thought nothing of it until some little time after

when it became annoying and it was with great difficulty that he could swallow.

He improved under treatment which he followed up very closely for about ten months.

CASE 6.—A marble cutter about 28 years of age. I only saw him but once or twice, and I never learned how his case terminated.

A case is reported where a man had a stricture which resulted from the sting of a wasp.

He drank a glass of beer containing the insect and when it reached the esophagus he felt a sharp stinging pain; shortly afterwards he vomited up a portion of the beer together with the wasp.

Another case is reported where a man was walking through a field with his mouth partly opened, a bee flew into it and down his throat, stinging him quite badly in the esophagus. This was followed by an organic stricture of those parts.

Double Ruler Diagnosis.

By B. T. Whitmore, M.D., L.L.D.

It has long since been said that it is a grave error to practice medicine by rule. What then shall be said of diagnosis dependent wholly on two rules, or rather in all apparent comparative degree on two rules? That this is not mere idle fancy is shown by the fact that a monthly magazine professing to be devoted to the science of medicine publishes and illustrates as the leading original communication of its current number a disquisition on the use of two rulers in the diagnosis of disease.

To be sure the paper has a more high-sounding title, it is called "The Head as an Aid to Differential Diagnosis," but it means the two rulers just the same. This medical novelty is published in the Homeopathic News of St. Louis for October, and as it appears without signature and in the most prominent part of the magazine the conclusion is legitimate that it must be an editorial utterance.

While the theory is now for the first time developed for the information of the profession, the author acknowledges the source of the germ which he has caused to sprout after some forty years of observation. "For this knowledge," he says at the outset, "I am indebted to the late Dr. Donovan." The late Doctor, he was a Ph. D. kind of a doctor, is explained to have been the English apostle of phrenology as laid down by Gall and Spurzheim and improved upon for the confusion of the people in the days when Mrs. Eddy had not yet begun to cure the imagi-

nations of those who dream themselves in the grip of imaginary ailments, and to castigate her enemies with holus-bolus citations from the Apocalypse and the prophetic menageries of Daniel. This good Dr. Donovan discovered that certain regions of the head corresponded with certain regions of the body and that from the cranial elevations and depressions it was easy to ascertain the relative strength of the corresponding organs. From this postulate the discerning phrenologist and instructor of the homeopathic author classes heads as healthy, tuberculous, and scrofulous. Granted the skill to recognize which class of head the patient has and the therapeutic knowledge of which number in the pill list is to be given to each class of head and there you seem to have the full science of this homeopathic and phrenologic divagation of medicine.

The sole instrument of diagnosis stated in the text is a ruler "placed against the temporal region." The pictures, however, show two simultaneous rulers placed against each temporal region, and it is at once apparent that greater accuracy is secured by the use of two. The method of diagnosis then is of the simplest. When your patient falls you do not wait for him to detail his symptoms. You slap the two rulers on his two temporal regions, and there you are. If the two rulers are perpendicular—to what they should be perpendicular is not stated, but probably to sea level—the patient is healthy, he really does not need your services, give him a placebo and collect your feet at once. If the two rulers diverge above the parting of the hair he is tuberculous and you treat him accordingly. If on the other hand they converge in their heavenly direction it is a clear case of scrofula and then, of course, you know what to do. The pictures seem to indicate yet another symptom not commented upon in the able contribution to medical lore which we are citing. It would appear that a military moustache is diagnostic of health, a Vandyke beard is a sign of turbercle, a clean shave means scrofula.

There is but one report in this interesting paper of clinical experience, but it was so completely satisfactory that surely no other would be needed. The rulers showed the patient to be tuberculous, but there was a full cerebellum. "All that he required," the learned author continues, "was something to remove the tubercular diathesis from his system." It took 6 months to do it, but it was done. At the end of the half year the rulers were again brought into play and the prominence of the upper part of the forehead was far less apparent.

This is how the miracle was effected: "The medicine that effected this wonderful cure was Dr. J. C. Burnett's Bacillum 200 (whatever that apparent proprietary may be); though some slight credit may be due to rigorous prohibition of coffees, tea and meat."

The diligent prosecutor of Dr. Donovan's great discovery seems to recognize either that the sight of the rulers might terrify the patient or else give the combination away, for he suggests that with experience he can do it without showing the rulers. His practice of ruler medicine he describes in the following lucid terms which cannot be too cordially commended to the young practitioner who has mislaid his rulers. "When a stranger calls for advice, my first request is for him or her to take a seat and remove the head-gear, after which I run my hands over the head, saying: 'Allow me to see what sort of a constitution you have'—but without letting them know what part I am inspecting—then I mention their constitutional peculiarities, such as 'You have a strong (or weak) stomach, heart or lung,' as the case may be, which usually produces a favorable impression."

The Mental Obliquities of Moral Degenerates.

By Samuel Knox Crawford, M. D., LL.D.,
Chicago,

At a small inland village of northern Ohio, many years ago, there lived an Irish Presbyterian minister and his wife, whose family consisted of four sons and four daughters. The oldest son, and the second daughter, as is often found to be the fact, in large families, were competitors for the mastery and dispenser of influence, and even in early life this competitive ambition developed into open hostilities which in later years grew into actual personal warfare. The boy strayed from the home to become a young man of education in the law, and was in position to seek and obtain a captaincy in the Ohio volunteer infantry forces that took part in the war with Mexico, and did so greatly to the displeasure of all the female members of his father's family, but lived to service with distinction to the end of the strife and return to face the maledictions of his irate sister and note the cold absence of a mother's love.

Meantime the youngest of the four sisters was born, not many years prior to the war, and greatly to the contempt of the oldest girl, who was enraged at the circumstance and refused to be reconciled, or to lend a

hand in the care of the mother and infant sister, resulting in the necessity of the women of the father's congregation making concerted arrangements for the supply of such service by turns and on schedule time, that the lying-in woman and her product and household affairs might receive all proper care and attention. Amongst these good women was a wife of a member of the parson's session and rode to her duties on one afternoon on the back of a gallant dappled gray whose speed and style were equaled by the equestrianism of his mistress, and while performing the functions of her visit tied the animal in the parsonage barn, and thereupon the greatly enraged girl thought to execute a scheme of escape from environment under contemplation by a return to the town of former residence, nine miles distant, and to accomplish this sinister design with care and despatch, she mounted the horse that stood in the barn and was off with celerity. But the owner was soon through with her duties and went to the barn for her mount, and missing him raised the alarm and an officer was secured to follow the horse seen by the neighbors to have gone at rapid gait on a certain road leading to the aforementioned town, and the horse and rider were soon captured because of the poor equestrianism exhibited. The lady, of course, felt indignant and chastised the ingrate by giving her a good shaking and called her by a name not in the church vocabulary for its young female members, and the whole matter was brought before the session for action, and a severe rebuke resulted.

The girl was somewhere in "her teens," and was presupposed to be a devout Christian, but the developments in the case plainly showed the contrary to be the fact. Soon after she married a young minister of another denomination than that of her father and went away from the scene of her disgrace.

The Rev. Mr. P. got a wife who had many mental obliquities and was a moral degenerate as he found ere the honeymoon had passed, and when the first child was born to him and found to be of the male sex her antipathy to it knew no bounds and its life was with difficulty saved, but then when a second came and was a female the turn of domestic affairs was for the better, and a reconciliation to motherhood was more promising, but the conditions were again reversed when another son was born to them and for reasons best known to the degenerate herself the child died at an early age.

Two of the gravest and most vicious habits that can be acquired by any human

being are the alcohol and opium habits, and at an early age this woman had found both by imbibing frequently from the family laudanum bottle and occasionally from the supplies of alcoholics kept about the house, which in her girlhood days was not an uncommon thing in many parts of our country, a custom inherited from beyond the seas, and this woman was the victim of the Jekyll and Hyde disease from before the horse thieving affair to the day of her death at an advanced age, as we shall see later on, and was revengeful in high degree and most jealous of her skill in deception and proud of her acumen in controverting detection in crime and perfidy.

The lady whose horse she stole in the capture of her and reclaiming the animal, and causing her summary punishment and public disgrace, was rewarded by the eternal enmity of the culprit and this enmity embraced all the relationships and descendants immediate and remote.

At the time of the affair in question, the lady in the engagement had a little son, the youngest of eleven children, and at the time was five years old, and as the story of this case develops is destined to figure largely as the principal victim of the malice generated by that unhappy transaction.

When the brother returned from Mexico covered with glory and filled with loyal enthusiasm it was natural that he should seek converse with veterans of other wars, and so rode out on a beautiful day to call upon the father's elder and sister's accuser who was an officer of equal rank in the war of 1812, and thereby was added insult to injury of the indignant household of his parents, all of whom except the father had the seeds of disloyalty in their composition as will appear further on, together with the single exception. The two veteran captains met and conversed long and earnestly over the hardships and trials of war, and the interested boy took it all in and became enthusiastic to follow some day in the footsteps of the father and his friend.

Of all liars and maligners the opium fiend is prince or princess of them all, and the one in question followed her brother to his grave with all the malicious tales that a morbid mind could invent.

Her husband was talented and accredited with fine oratorical powers, but could never retain a pasture long on account of the difficulties into which the wife led him. He came back to her old home on one occasion and conducted a controversial discussion with a minister of still another branch of the Presbyterian church with great acceptance to all concerned, from her father's pulpit, greatly against her will, and thereby

excited her everlasting displeasure and eternal disapproval in that the discussion was so much more ably conducted than the father could have done that she thought the family humiliated, certainly the thoughts of a morbid brain and moral obliquity. All such cases are difficult of analysis and when analyzed still more difficult in which to employ efficient therapeutics. The offensive woman who declined to approve of the theft of her horse as an act of Christian womanhood was denounced on all possible occasions, and her character traduced whenever and wherever opportunity offered but died unscathed by the calumny and vituperation of the degenerate's tongue, and about two years later the veteran husband followed her to the silence of the grave, and about four years still later her own father followed them and was laid quietly away beside them on the great hill where the city of the dead looks down upon the suburban village of the living. The boy who had become enthusiastic over possible military experience from the conversation overheard between the two ex-captains was the principal one now left to suffer from the animadversions of the degenerate, and it so happened that the last long parental talk between father and son brought forth an earnest entreaty from the veteran father that the only remaining son would hasten to prepare for efficient military work in the great conflict he felt sure was impending, and after the good father was laid away, and the estate settled and all things arranged in proper manner the young man entered an academy preparatory to gratifying a long felt desire to enter the field of medicine and surgery, and here he met the young lady, who had grown into mature womanhood from the baby in question when the horse affair shook church and village from center to circumference.

They were both ambitious to stand at the head of their classes and the classes were common to both, and in the friendly contest for place each became an admirer of the other and as is generally the case admiration intensified to sentiment more tender than that and resulted in a mutual love affair, and the degenerate sister of the girl was aroused into renewed actions of hostility, but as the only way to overcome difficulties is to overcome them, love always adopts the surest way, and so the love affair between the two young people matured into an engagement despite all the opposing forces that the embittered bombardments of moral degeneracy could bring to bear upon it. New tactics were adopted by the enemy. Another young gentleman, classmate, who was preparing for the ministry, came

aggressively into the field at the instance of the opium eater, and the young theolog emerged from Westminster college about the same time that young Esculapius came from the university of Michigan, and both came into full fledged professional being a short time before the beginning of the great civil war that shook the Continent from 1861 to 1865. The young doctor entered the army early in the strife to the great relief and rejoicings of general moral degeneracy and it was hoped and expected that his bones would bleach beneath the gentle southern sky.

The Mexican veteran captain also was in the thickest of the fray in front of Atlanta in 1864, as a major of cavalry. Degenerates like "Mr. Hyde or Jack the Clipper," are cunning but not wise, and the degenerate in question thought to utilize another of her shine in the person of another young doctor and rival for honors and the hand that was left behind, and so wrote an appealing letter to the major to seek and find both the young surgeons and make returns of all unfavorable criticisms of the one and the highest possible commendations of the other, and the major unsuspectingly set about the accomplishment of the movement little dreaming that the scheme was one of decoy, and found the surgeons named, but conditions and environments reversed from the order hoped for by his degenerate and deceitful sister, and so wrote a manly soldierly report of his findings to the utter route and discouragement of the enemy of all.

On the Close Relation Between the Nasal and Cranial Cavities and Some of the Dangers of Such Relationship.

By William C. Krauss, M.D., Buffalo, N. Y.

The close proximity of the nasal and cranial cavities has been brought to my attention many times while removing the brain from its natural position in the human body. Time and time again in trying to preserve the dura at the base of the brain, and while dissecting off the dura from its long attachments, I have unintentionally opened the nasal chambers and have wondered at the pathological conditions existing in the anterior fossa of the skull. A more careful examination would make clear, that careful as I was, I had broken through the cribriform plate of the ethmoid and was delving into the mysteries of the nasal instead of the cranial cavity. Their relationship, as I have had opportunity to observe, is of the most intimate character, and the

results of this intimacy are of serious and far-reaching import.

The cribriform plate of the ethmoid, a thin brittle lamina of bone, about the thickness and fragility of common stove mica, forms part of the base of the cranium and is separated from the brain by only a single layer of the dura. It is moreover perforated by numerous foramina, which permits egress of the olfactory filaments going to the upper third of the septum and over the surface of the superior and middle spongy bones of the nasal fossæ. The mucous membrane covering the roof, the fossæ is closely adherent and very thin, adding no very important or impenetrable barriers between the two cavities. Anatomists of all and a goodly majority of the laity at the present time recognized the "open door" arrangement of these two cavities and believed as many do even to this day that the watery secretions from the nose come from the brain and that after a copious secretion the brain becomes relieved and the individual more clear-headed.

Their deductions, in part, abused as they may seem, may not be altogether fallacious, as we shall see in studying this question somewhat more closely.

The close kinship between these two cavities, the one the most guarded and protected in the body, the other, the most open and exposed, must suggest some independence, some interchange of function of their respective contents. The nose certainly does not receive any benefit from its neighboring organ, except its quota of nerve supply. The brain on the other hand at first sight, would seem to ask even less of the nose than vice-versa; but what of the currents of air rushing backwards and forwards through these nasal channels?

It has been proven that the cribriform plate of the ethmoid is not impervious to oxygen; then is not aëration possible between the nasal and cranial cavities through the cribriform plate? And is not the structure of this plate so wisely designed as to permit some circulation and consequent direct aëration of the brain?

This fact is so patent to me, both physiologically as well as pathologically, that we might speak of these plates as the ventilators of the brain, each ventilator acting for its respective hemisphere, inasmuch as the falx cerebri is attached to the crista galli, which divides the cribriform plate into two lateral halves. This view is at variance with the commonly accepted ideas of larynalogists and rhinologists, but appeals to me so strongly that I do not hesitate to express my views publicly.

W. Meyer was doubtless the first to point

out the evils of deficient nasal respiration and its baneful effects upon the brain and mental development. Cnye first pointed out that aprosexie or the inability to concentrate the attention for any length of time upon one subject followed the clogging of the nasal chambers. Seiler and Bresgen were also pioneers in this line of work.

The *modus operandi* of this influence is explained by them as due to the obstruction of the lymph and blood vessels in the brain and nose.

Ziene found that by sewing up the nostril of young animals that the side of the head corresponding to the occluded nostril was maldeveloped. This retarded development affected the brain, face, eye and pharynx. The changes in the affected eye were interesting to note, the orbit of the affected side was smaller, the field of vision narrower and the refractive power less. If the eye on the normal half be emmetropic the affected will be hypermetropic; if myopic then the affected eye will be slightly myopic or emmetropic. As a rule, the affected eye will also be astigmatic.

Ziem also found a close relation existing between certain mental disturbances and nasal troubles, especially affections of the accessory cavities determining disturbances in the circulation of the frontal region of the brain.

It has been demonstrated on autopsy that where obstruction of one nasal fossa had existed for a long time, thereby preventing adequate ventilation of the hemisphere of the brain on that side was imperfectly developed or retarded as compared with the hemisphere on the side where nasal ventilation was unobstructed.

The effect of nasal obstruction upon the mental development of children is well known to all rhinologists, the peculiar mental hebetude, perhaps apathy with general lassitude, weariness and incapacity for mental work or mental effort in mouth breathers, due to long obstructions, hypertrophied tonsils, nasal polypi and the like are known to you all.

Children with pharyngeal adenoids, thereby causing improper nasal respiration, are affected with symptoms far more serious than the importance of these growths warrants. Some of these symptoms have been ascribed to reflex disturbances, possibly that is true, but many of them, especially those indicative of cerebral involvement are caused by the non-ventilation of the nasal and cranial cavities. A striking case of this nature came under my personal observation lately, occurring, as it did, in one of the little members of the family. The patient, a healthy girl, had developed up to

her fifth year, at the same rate and to the same capacity as girls are wont. She was well developed physically, without any of the stequota of degeneration, dentition, ambulation and articulation; each occurred at their proper interval of time. She was bright, active, playful, her spirits buoyant and gave promise of a brilliant intellect. Suddenly a change came over her, she became dull, stupid, listless, could not remember her letters, could not spell simple words of three letters, did not care to exert her mind and was slowly, but certainly, becoming somewhat idiotic. She became a mouth-breather, would snore at night and began to lose flesh and appetite. The former intellectual facial expression gave way to one of dullness and it was evident to all with whom she came in contact that instead of progressing, she was retrogressing. Surmising after a period of time that perhaps adenoids were present, she was examined and then operated on. The change in her mentality was almost instantaneous. It seemed as if her mental faculties had been suppressed for the time being and when relieved broke forth with surprising fertility. It was now necessary to restrain her. She would remember verses without effort, and in a few weeks took her place at the head of her class in school.

The vegetations removed were very small, and but for the deficient respiration, it did not seem possible that they could account for all the disturbances noted. The effect of temporary closure of the nasal fossæ is plainly seen in brain workers suffering with a cold in the head. Their most bitter complaint is that they feel dull, their mind is inactive, hard to think mental work is an effort, symptoms referable to some impairment of the frontal lobes of the brain.

To find some cause for this peculiar condition it is necessary to study the arterial supply of the brain, but more especially of the frontal lobes. The laryngologists and rhinologists claim that it is not so much the improper ventilation of the nasal fossæ as it is obstruction to the lymph and blood vessels going to the brain caused by the adenoids, hypertrophied tonsils and the like. The frontal lobes of the brain receive their arterial supply cortically from the middle cerebral arteries through the subfrontal and precentral branches. On the basilar surface they are supplied by branches from the arteriæ and middle cerebral arteries, both taking their origin from the internal carotid arteries. It is therefore not from any interruptions in the arterial supply of the frontal lobes that these disturbances ensue, but instead, from the small venous branches passing from the

fossæ through the apertures in the cribriform plate and emptying into the superior longitudinal sinns, if this explanation be the correct one. To me something more is necessary, because when there is deficient nasal ventilation due to conditions not affecting these nasal veins as hypertrophied tonsils, closure of the nostrils and the like, frontal lobe disturbances are observed to the same extent and with the same intensity. It seems to me, therefore, that the currents of air and the replenishment of this air in the superior nasal fossæ is of considerable moment, either in its effect upon the blood passing through the apertures in the cribriform plate or else in the osmosis of the oxygen and its direct action upon the frontal lobes.

Now turn to another phase of this subject and see what drawbacks, what dangers are attendant upon such a naso-cranial alliance. The nose as has been stated is the most open and exposed cavity of the body. It receives or should receive all the inspired air, serving at the same time as a filter for all kinds and forms of germ life, infecting and disorganizing through contact its own secretions, thereby setting up a nidus for further propagation and infection.

Its mucous membrane makes a very comfortable hospitable biding place for many forms of pathogenic as well as non-pathogenic micro-organisms. Passive in its function, as well as action, supplied with warmth as well as moisture, it facilitates their growth and development, thus offering extraordinary inducements to these little settlers, which as we shall see are not slow or backward in accepting such generous bounties.

According to Sternberg, the following species have been obtained from the nasal secretions:

NON-PATHOGENIC.

- Micrococcus nasalis, (Haje* K.)
- " Albuliquefacilus (Von Besser.)
- Diplococcus coryzal (Haje K.)
- Micrococcus cumulus tennis, (Von Besser.)
- " Tetragenus subflavus (Von Besser.)
- " Faltidus, (Klamann.)
- Diplococcus fluorescens faltidus, (Klamann.)
- Vibrio nasalis, (Weibel.)
- Bacillus striatus flavus, (Von Besser.)
- " " Albus, (" ")

PATHOGENIC.

1. Staphylococcus pyogenes aureus.
2. " " Albus.

3. Streptococcus "
4. Bacillus of Friedlander.
5. " " Rhinascleroma, (?)
6. " Fætidus ozænæ (Haje K.)
7. " Maller (Lœffler.)
8. Snearagdinus faltidus (Reinmann.)

In culture experiments made by Von Besser, Wright and others the nasal mucus was found to contain a great variety of bacteria; among others the pus cocci were frequently found by both of the observers mentioned.

In eighty-one cases Von Besser found the "diplococcus pneumonia" fourteen times, staphylococcus pyogenes aureus fourteen times, streptococcus pyogenes seven times and Friedlander's bacillus twice. Twenty-eight of the cases examined were convalescents in hospital, among these the pathogenic species mentioned were found less frequently than in other individuals. The following non-pathogenic species were isolated: micrococcus liquefaciens albus in twenty-two cases, micrococcus albus in nine cases, micrococcus cumulus tennis in fourteen cases, micrococcus flavus liquefaciens in three cases, bacillus striatus albus in ten cases, etc.

Paulsen (1890) made thirty-one cultures in nutrient gelatine from sixteen persons and thirty-three in nutrient agar from twenty-two persons, with the following result: Eleven remained sterile, nineteen showed not more than ten colonies, sixteen less than one hundred, twelve more than one hundred, and six the number was so great that they could not be counted. Micrococcus were more numerous than bacilli, of these a "sulphur yellow coccus" in tetrads was found in eight individuals. Various species of liquefying cocci resembling the pus cocci were isolated, but the conclusion was reached that none of these were identical with the staphylococci of pus, which Von Besser and Wright both found in considerable proportion of the culture experiments made by them.

Straus (1895) has examined the nasal secretions of persons associated with tubercular patients for the purpose of ascertaining if the tubercle bacillus was present.

The presence of this bacillus was demonstrated by inoculation into guinea-pigs; in nine healthy individuals out of twenty-nine examined, two of these were physicians and six were nurses.

Vansant, of Philadelphia, gives a brief report of the results of a bacteriological investigation of the nasal mucus in 100 cases of chronic nasal discharge. Of the 100 cases examined the Klebs-Lœffler bacillus was found in 26, 11 of which had

†In the Journal of the American Medical Association, Feb. 27, 1897.

atrophic rhinitis, 3 purulent rhinitis, 5 in simple rhinitis, 3 in nasal syphilis, and 3 in hypertrophic rhinitis. In 58 cultures staphylococci were found. No cases were examined which showed any symptoms of diphtheria. His conclusions are that in a large percentage of chronic nasal catarrh the secretions are infected with diphtheria bacilli, staphylococci, etc.

It is more to the consideration of the question of germs of meningitis gaining access to the cranial cavity, through the nasal, that I wish to occupy your further time and attention.

Schiff recalls the fact that epidemic cerebro-spinal meningitis has long been known to begin with violent rhinitis, evidences of which are often found on autopsy. After the discovery of the meningococcus intracellularis in the nasal discharges of the meningitic cases, it became the custom to examine for this parasite as a routine measure, and many clinicians have invariably found it. Then observers began to examine non-meningitic cases to determine whether this parasite, like the pneumococcus, was present in the healthy subject.

The earlier investigations having been inconclusive, Schiff was led to look into this matter, and in the nasal mucus of twenty-seven healthy patients found the meningococcus seven times. Cultures proved virulent to guinea-pigs. The fact is established that the parasite occurs much oftener than it infects, and there has long been a conviction that epidemic cerebro-spinal meningitis is spread by the nasal mucus. The curious fact that typical cerebro-spinal meningitis has often followed fracture through the base of the skull, is readily explained by the passage of the germ through the breach.

In an extended article on Meningitis in Children, A. H. Wentworth (Boston Medical and Surgical Journal) reports in detail eleven cases, proving that primary cerebro-spinal meningitis is caused by the diplococcus intracellularis meningitis and in some of these cases this germ was found in the nasal cavities.

In an article on Cerebro-Spinal Meningitis, in Medicine, Dr. Scherer arrives at the following conclusions: The infection in epidemic meningitis may take place by way of the upper air passages. The mode of infection seems to be that the non-mobile diplococcus is taken up by leucocytes and thus carried through the lymph spaces to the brain and its membranes. Demonstra-

tion of the diplococcus may be of value in arriving at a diagnosis in doubtful cases.

The earlier the examination is made, the more are the chances of finding the organism.

The observations have not been numerous enough to decide the persistence and duration of virulence of the diplococcus in the nose in these cases.

The nasal secretion of meningitis should be considered infectious and handled accordingly.

In a similar way the presence of diplococcus of pneumonia and streptococci may be expected to be found in cases where the infection is through the inspired air, that the currents of air and the replenishment of this air in the superior nasal fossæ is of considerable moment, either in its effect upon the blood passing through the apertures in the cribriform plate or else in the osmosis of the oxygen and its direct action upon the frontal lobes.

To draw a moral from the study of this question showing that the nose and brain are intimate in their anatomical associations, in their physiological activities, and lastly in their pathological importance, I desire to make the plea for a more careful attention to be given the nasal mucous membrane.

We clean sedulously the surface of the body, the scalp, the teeth and buccal cavity and for cleanliness merely the rectum and the vagina, and yet never dream of applying any lotion to the most dangerous and filthiest of all cavities—the nasal. This, perhaps, has been due to our early education of lavage. If so, then our children and patient's children should be taught that nasal toilet is a part of the daily toilet.

Seiler calls attention to the fact that it is no more difficult to teach the child to cleanse the nostrils and anterior cavities with an appropriate wash than it is to teach them, as is done in many families, to use the tooth-brush.

Phillips in following up the question recommends warm medicaments not strong enough to cause pain, to be applied daily.

Farber, writing on the Toilet of the Nose, says: It follows, then, that the long neglected nose should have most careful attention. It should be as systematically cleansed as are the mouth, the teeth, the ears, the rectum, etc.

In America, in all large cities and towns, and, for that matter, in every country, our

*New York Medical Journal, July 18, 1896.

*American Medico-Surgical Journal, Oct. 17, 1896.

†Cincinnati Lancet Clinic, Jan. 16, 1897.

streets are made receivers of all kinds of animal and vegetable matter, fresh and decayed, and the fine dust assails our nostrils from morning until night laden with all sorts of bacilli and disease germs. It is therefore suggested that our nose should be prepared each morning for the exposures of the day. Let them be oiled up for their duties and strengthened to resist the deadly germs everywhere so prevalent.

The writer might well have added that in so doing, not only was the nose being fortified against but to a lesser degree also the cranial cavity with contents.

The old Dobell's solution has been found most satisfactory of all for cleansing and disinfecting the nasal chambers. It should be used warm in small quantities only every morning, followed by any bland oil, such as liquid vaseline in small quantities. By such prophylactic measures our various forms of catarrh will disappear largely, and with them many other affections of contiguous cavities and structures, as well as promoting the general health. Even the sudden acute coryzas may be materially cleansed in severity.

Research into the Effect of Prolonged Manipulation of the Brachial Plexus and the Nerves Supplying some of the Muscles of Respiration; Research into the Effect of Filling the Chest with Fluid.

By George W. Crile, A. M., M. D., Prof. of Clinical Surgery and Applied Anatomy, Cleveland College of Physicians and Surgeons; Surgeon to St. Alexis and Cleveland General Hospitals.
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METHODS OF RESEARCH.

The animals were all reduced to full surgical anesthesia by ether before the experiments were begun and were killed before recovery from same. Respiratory tracings were obtained by means of a rubber tambour, attached to a canvas band, encircling three-fourths of the circumference of the animal's chest. This energized a writing style attached to an organ key mechanism. Respiratory tracings were obtained very accurately. Blood pressure was recorded by means of a mercury manometer. The drums were revolved by a mechanism so made as to be capable of a variety of movements, ranging from one revolution in thirty minutes to eighteen revolutions per minute, so that any phase of any giving tracing might be duly recorded. The following is

a part of a rather extended research which enabled us to estimate the reliable reduction with comparatively few experiments:

PRELIMINARY REMARKS.

On several occasions, having observed a dangerous depth of chloroform narcosis rapidly induced in operations involving manipulation of the brachial plexus, a question arose as to whether or not some cause for such a result might be found; a research into this subject was therefore made, to determine whether or not any peculiar effects upon the respiration or the circulation attended operations in this region.

PROTOCOLS.

1. On a twenty pound mongrel, in only fair physical condition, under full ether anaesthesia, with the carotid pressure and the respirations registering, after a control tracing had been secured, the following experiments were performed: The brachial plexus was exposed high up, in close proximity to the chest-wall, and continuous manipulating made, causing thereby an irregular circulatory curve, which on the average, amounted to a slight rise in blood-pressure. At the same time the respirations were increased in frequency and in depth. The increase in frequency was such that five respirations were executed in the time previously occupied by three. With the increased amplitude and increased frequency there was a very marked increase in the total volume of air changed in the lungs. This manipulation was continued for ten minutes, and the respiratory increase was sustained. On cessation of the manipulation the respiratory rhythm was reduced in frequency and amplitude in about the same ratio that the manipulation had caused the increase. On exposing the opposite plexus and repeating like procedures, equally striking results were obtained. It was observed, however, that when the principal traction was made upon the peripheral nerve trunks, the effect upon the respiration was much more less than when the traction was made on the central portion of the nerve trunks. Then, allowing the animal a little more time for rest, an assistant repeated the manipulation in the one side while on the opposite side similar manipulation was made by myself. It was found that the more the central portion of the trunks was stretched and manipulated, the more marked was the respiratory excitation, and that during this manipulation the anaesthetic was inhaled in its usual quantity, an excessive anaesthesia was induced. After a considerable lapse of time the manipulation

and traction produced less marked respiratory alterations. The nerves supplying the muscles of the chest were likewise subjected to manipulation, producing an increase in the frequency and amplitude of the respirations, though not so striking as the preceding.

2. Under chloroform anaesthesia, but in other respects under similar conditions to the preceding case, a fifteen pound mongrel was subjected to similar experiment. After securing a control, the nerves were again subjected to continued manipulation, causing a marked increase of the respiratory action and very irregular blood-pressure curve. Very soon, however, the inhalation of the usual amount of chloroform produced an over-anaesthesia, and the blood-pressure rapidly sank. On cessation of the manipulations the respirations diminished very markedly in frequency and amplitude. The animal was reduced to almost collapse, from which it required considerable time, together with artificial respirations, to restore it. After sometime had elapsed and respiration was completed, the same procedures were repeated with like results.

3. On an eighteen pound bird dog the following experiments were performed under conditions similar to the first: The skin was rapidly removed from the chest, exposing the pectoral muscles. Manipulation was then begun upon the muscular structures and the nerves of the extraordinary muscles of respirations. This manipulation produced an increased respiratory action, which increased in frequency and amplitude as before. The blood pressure, however, was much less altered than in the preceding case. On cessation of this manipulation, the respirations again resumed the normal rate. On allowing the chloroform cone to remain in position, then manipulating the nerves and muscles on both sides of the chest simultaneously, an over-anaesthesia was rapidly induced. The over-anaesthesia was first observed in the marked depression of the blood-pressure. After the cessation of the manipulations the respiration became very slow and shallow, showing likewise the effect on the over-anaesthesia.

4. A mongrel, weighing nineteen and one-half pounds, in good condition, whose carotid blood-pressure was one hundred and eight millimetres, was subjected to a simultaneous dissection, irritation, and traction on both brachial plexuses and nerve muscle apparatuses. These mechanical stimulations produced a very marked increase in the respiratory action, more than doubling that recorded in the control. Anaesthesia was carefully guarded during

the first portion of the experiment, but in the latter portion the anaesthesia was allowed to remain with the degree of chloroform saturation that was believed to be safe in sustaining an ordinary anaesthesia. On repeating bilateral simultaneous manipulations, the respirations were again very markedly increased in both frequency and the amplitude, thereby inducing very rapidly an over-anaesthesia. This over anaesthesia was first observed on the rapid decline of the blood-pressure, and later in the respiration. When this effect was noted, no session of the manipulation there was a rather rapid failure of the respiratory action. Artificial respiration was necessary to restore the animal. After this restoration the dog was so weak that it did not readily respond to further experiments.

5. In this experiment the foregoing technique was repeated. There was, however, but little alteration in the respiratory action, even though the manipulation was quite as severe as in the preceding case.

SUMMARY OF EXPERIMENTAL EVIDENCE.

It was found that during manipulation of the brachial plexus, or of the nerves supplying the muscles of respiration, an increased respiratory action was produced, resulting in over anaesthesia by causing an excessive inhalation. This was especially true in experiments in which chloroform was administered. On the cessation of the manipulation the normal respiratory action was resumed. It was found, however, that by continuing the manipulation of these structures there was a greater tendency towards respiratory failure later on in the experiment. It is true that mechanical stimulation of any nerve will produce increased respiratory action. It would seem that the manipulation of the respiratory nerve muscle apparatus or nerve trunks may affect the respiratory action to an extent sufficient to constitute a danger over-anaesthesia, provided the inhaled air is saturated with the anaesthetic to the same degree as in the control. In such experiments an earlier break down of the respiratory mechanism occurs.

On cessation of a severe manipulation, respiratory depression or failure is very likely to occur, because then, the mechanical stimulation having been withdrawn, the mechanism is thrown upon its own resources, which have been much impaired by the previous stimulation.

PRACTICAL APPLICATION.

The depression referred to in the preliminary remarks would probably appear only in cases involving rather direct mani-

pulation of these nerve—structures, and more readily in chloroform anaesthesia on account of the relatively greater potency of this anaesthesia.

But the point of greatest practical importance is the proper interpretation on the part of the anaesthetizer of the cause of the increased action. Such increased action would ordinarily be interpreted as a symptom of under-anaesthesia, and at once suggest giving more anaesthetic. Under these circumstances the anaesthetic effect would be more marked upon the circulation than upon the respiration until the patient sinks into a collapse more or less profound. The respiratory depression appears later because of the mechanical stimulation which will maintain respiratory activity until the centres are exhausted.

PRELIMINARY REMARKS.

It occasionally happens that the chest is rather suddenly filled with fluid, and in order to determine the character of the alterations thus produced in the respiratory and cardiac action, animals were subjected to a rapid filling of the chest with normal saline solution at about the temperature of the body.

PROTOCOLS.

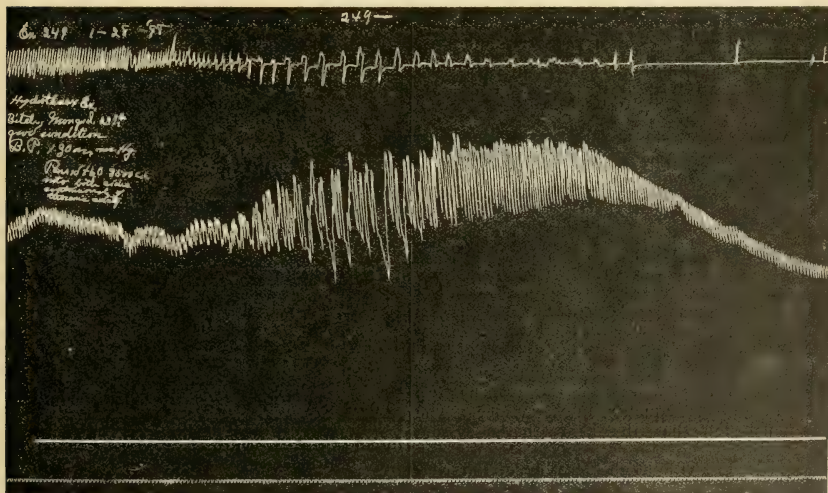
1. On a bull-dog weighing forty-two pounds, with initial blood-pressure at one hundred and thirty millimetres, the following experiments were performed: A small incision was made in the integument over the anterior aspect of the chest, between the fifth and sixth ribs; then, carefully

guarding against the entrance of air, a canula connected with a siphon bottle of salt solution was thrust into the pleural cavity. The solution was allowed to flow rapidly until two thousand five hundred cubic centimetres entered, and the following results were noted: As the chest filled, the blood-pressure at first slightly rose, the character of the heart beats changed to slow, full beats of extraordinary height, increasing in fullness for about two minutes, then gradually declining until death ensued. The respirations were temporarily arrested, then executed slow and shallow excursions until the end, which was nine minutes after the beginning of the flow.

2. On a water-spaniel weighing twenty four pounds, with blood pressure at one hundred and thirty millimetres under chloroform anaesthesia, the following experiment was performed: The technique as described in the preceding case have been carried out, a double hydrothorax was induced, producing thereby, as in the former experiment, a gradual decline in the blood-pressure, with slow, full beats, showing very marked inhibition. The respirations were altered in almost precisely the same manner as described in the preceding case. The animal died in twelve minutes.

3. On a shephard dog weighing forty-six pounds, with initial blood-pressure at one hundred and forty-eight millimetres under chloroform anaesthesia, the preceding experiments were performed with almost identical results.

4 & 5. Two animals were subjected to



experiment under the same conditions as in the preceding cases, with practically the same result.

SUMMARY OF EXPERIMENTAL EVIDENCE.

The experimental evidence at hand tends to show that a double hydrothorax, rapidly induced, is extremely fatal. It is impossible for the lungs to become inflated when an additional pressure to that of the natural atmospheric pressure is added to the resistance to be overcome. The phenomena are not the same as in pure asphyxia. In pure asphyxia the blood-pressure suffers a momentary decline, after which there is an actual rise, often times a very considerable rise above its previous height. The character of the heart's action in asphyxia experiments is, during the first several minutes at least, but little altered, thus making a striking contrast to the curve executed by the heart in the experiment upon artificial hydrothorax. While in asphyxia there is for a time powerful respiratory effect, in these experiments a decreasing respiratory action is at once inaugurated. In any given case of sudden hemorrhage filling the chest, the depression produced is only in part due to the pure effects of blood from the general circulation. A considerable factor in the result is due to the mechanical effect of fluid interfering with the cardiac and the respiratory action.

HYDROTHORAX EXPERIMENT.

The upper tracing represents the respiration the next the blood pressure, and the lower two the signal and time (in seconds) respectively. Note the rapid increase in the respiratory action, also the marked rise in the blood pressure. Note also the slow sweeping strokes representing the cardiac action—resembling an asphyxia curve. The heart beats slowly to the end.

A Note on the Artificial Production of Fatty Degeneration of the Liver.†

By Dr. Julius Pahlman, Buffalo, N. Y.

Speaking of fatty degeneration of the liver, Osler says: "Certain poisons, of which phosphorus is the most characteristic, produce an intense fatty degeneration with necrosis of the liver cells." That is all, and if it means anything, it means that. Aside from the action of poisons, we know nothing about it. The most careful examination for nerve action in the liver has up to date been equally unsatisfactory. The conclusion that the sympathetic system

sends vaso-constrictor and vaso-dilator nerves over the splanchnics, while the vagus supplies only the latter, is of very little practical use to us.

Many years ago Claude Bernard demonstrated that injury to the floor of the fourth ventricle produced a diabetic urine in the animal experimented upon. We are probably justified in claiming that this injury disturbed the regularity of the hepatic circulation, thereby preventing the liver cells from acting sufficiently upon the blood and allowing an excess of sugar to escape by the hepatic vein to be excreted by the kidneys. But whether the effect of the injury was carried to the liver by the vagus, or the spinal cord or the sympathetic chain, we don't know.

In fact, it seems safe to say that our knowledge of the causes of diseased livers in general is limited, and that of fatty degeneration in particular, we know practically nothing. In a subject as obscure as this, every little helps, and in this spirit I offer the following short note to the clinicians for further investigation, and, if possible, practicable application.

In a long series of experiments on dogs, performed in the physiological laboratory of the University of Buffalo during the past four years, section of one pneumogastric always produced fatty degeneration of the liver, the contents of the hepatic cells changing into fat globules at times to such an extent that drops of oil oozed out during the handling of the organ. When the right nerve was cut the liver degenerated faster than in the cutting of the left. The biliary functions seemed to progress regularly, because in all cases the gall-bladder was well filled at death with normal bile, and during the time that the animals were kept alive, from two to eight weeks, they did not appear to suffer from any digestive troubles, excepting a slight diarrhœa, which was probably due to disturbance in stomach or small intestine, and not to the liver. How long such animals could have lived, and what would finally have killed them, must remain the subject of further experiments.

If we remember the intimate connection that exists around the fourth ventricle between the nuclei of the vagus and almost every other nerve of the body, we can understand how many complicated abnormal reflexes can be thrown over the vagus, and if, from some cause or other, reflexes from somewhere inhibit its hepatic fibers, it seems within the realms of possibility that in conformity with the above experiments, the result will be a partial or total fatty degeneration of the liver

†Read by Title at the Meeting of the New York State Medical Association.

THE Charlotte Medical Journal.

Editorial Department.

E. C. REGISTER, M. D.

J. C. MONTGOMERY, M. D.

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FEBRUARY 20th, 1900. 12 M.

The Secretary of the Tri-State Medical Association of the Carolinas and Virginia, Dr. Irving, has called attention to the coming meeting of the Association in a preliminary notice in which the following committee of arrangements is mentioned:

Drs. Charles W. Kollock, R. B. Rhett, W. P. Porcher, T. Granger Simons, P. G. DeSaussure, Ed. F. Parker, Jno. L. Dawson, Chas. M. Rees, and Robert Wilson.

The program, from the number and the ability of the authors of the papers, will be fully up to the high standard already set.

The second annual meeting promises well for the future usefulness of the Association.

The annual discussion, as announced, will be on the negro and his sexual life, and this discussion will be opened by Dr. Paul B. Barringer of the University of Virginia.

This discussion will go far to put on a scientific basis a subject which now has only a dim and fearful outline of reality.

The program is still open for a few more papers, those intending to read will do well by forwarding their name and the title of their paper *at once* to Dr. Paulus A. Irving, Richmond, Va., who will assign them a proper place in the order of exercises.

Don't forget the time, Tuesday, February 20th, 1900; or the place, Charleston, S. C.; or the occasion, the second annual meeting of the Tri-State Medical Association of the Carolinas and Virginia. And remembering these, be on hand.

MEDICAL COLLEGE DIPLOMAS.

All is not gold that glitters, and all diplomas do not entitle a man to practice medicine.

According to Dr. Baldwin, late chancellor of the Ohio Medical University, the enormous debt of the Ohio Medical University renders it absolutely essential that it should have a large income. And so

they keep the standard low and representations high.

He claims that they have little to offer in the way of clinical advantages, dissecting material and other essentials for satisfactory medical education. All of which goes to show how important is the work of the different Medical Examining Boards in protecting the people and the profession from the ignorant and reckless physician holding a diploma from a second class school.

Those who would evade the law if they could, seek to discredit the work of the State Examining Board, but when we consider for a moment the number of so-called medical schools throughout the country that are simply out for the money, and the number of young men in the country who think the practice of medicine a downy bed of ease on which he may lie and make money to burn, then the importance of some rules and regulations are plain.

If the diploma made the doctor then all would be well, but, alas! too often it only gives a most undeserved right and privilege to one who is only sufficiently educated to be most dangerous to the community and the profession.

THE VITAL STATISTICS OF MASSACHUSETTS.

The Thirtieth Annual Report of the State Board of Health of Massachusetts contains some important vital statistics.

The registration laws have been in force since 1842 in this State and have come to be well carried out so that the statistics have a value of their own.

The reports show that out of 100,000 children born alive in Massachusetts, 16,000 die before arriving at the age of one year, 78,000 live to the age of three years, 77,000 survive the age of five years, 5,000 live to be 53 years old, while 25,000 live to the age of 72 years. 51,350 are male and 48,650 are female. The probability of living a year is at its highest point for boys at 12 years of age, for girls at 11.

The death rate of all ages from 5 to 40 has very perceptibly diminished in the past few years and this result has been brought about by the reduction in the number of deaths from infectious diseases, including consumption, which occur in the early period of life, from two years up to thirty. This decided increase in the number of survivors throughout the youthful ages of life has a marked effect upon the vitality of the population, and is undoubtedly due in no small degree to the increased attention which has everywhere been given in the past twenty-five years to public hygiene.

THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

The 47th annual meeting of the State Society will be held in Tarboro, Tuesday, May 15th, 1900, under the Presidency of Dr. Geo. W. Long, of Statesville.

The chairmen of the different sections will please send in their list of papers and names of writers to the Secretary as early as possible, as the sections will be given place on the program in the order of their report.

The Board of Medical Examiners will meet at the same place (Tarboro) on Wednesday, May 9th, 1900, that is the Wednesday previous to the meeting of the Society, instead of the Thursday previous, as they did last year.

The official announcement will appear later.

Candidates for license to practice medicine in the State of North Carolina, and all those practising under temporary license, must present themselves Wednesday, May 9th, at Tarboro for registration and examination.

CONCLUSIONS.

How often do we find at the end of an author's paper from five to twenty conclusions drawn from perhaps one case reported therein?

How many fellow-practitioners have we met who do not use this or that drug because it failed them in one case?

Conclusions are valuable things; in fact, they are indispensable things, but they must rest upon a firm foundation.

Suppose I report one case of typhoid fever treated by one pint of sterile water every three hours given by the mouth in which recovery occurred promptly, the temperature reaching normal on the 14th day, the tongue remaining moist all the time, and at the end offer the following conclusions: (1) Typhoid fever is a disease characterized by the blocking up of the excretory channels, while the elements which should be excreted are being formed in unusual amounts; (2) this blocking up of the roads of elimination is due to the drying up of the watery elements of the tissues; (3) the sewers of the body simply need free and continued flushing until they are washed clean; (4) the alimentary canal is the main sewer, therefore flushing must be through the mouth; (5) by the ingestion of an excessive amount of water all the emunctories are washed out and freed from impurities; (6) sterile water being harmless may be used *ad libitum*; (7) not less

than half a gallon in the 24 hours should be used in all cases, etc.

Now these conclusions would be worth something if every one case was only one hundred, or one thousand, or one hundred thousand, but being only an isolated experience with one very mild case, perhaps not typhoid at all, they are not worth three straws in a whirlwind.

And so the medical thought and practice of to-day is vacillating, uncertain, wabbling from one extreme of vice to the other extreme of virtue. The medicine of to-day is being constantly varied by the conclusions drawn from the experience of isolated cases.

A practitioner who has only treated one case of appendicitis in the past two years can be heard across the street declaiming on the sovereign virtues of opium and bran poultices in this disease when used by skillful hands. But after all, this is a natural feeling we all cherish that which has served us a good turn in an emergency, but the doctor must be on his guard against confounding what he was giving the patient when he was getting well, with what he was giving the patient that helped him to get well. Much of the so-called medical treatment of certain diseases is nothing more than doing nothing and one does nothing is as good as another, and so we should not be so hasty to uphold one plan of expectant treatment to the utter disregard of all other plans of the same kind. In the old days there was a kind of seeming stability about things, there was even some definiteness in the treatment of disease.

The old doctors believed in bleeding, no matter what the disease was, the remedy was blood. It was as though they looked upon disease as the result of sin and believed in the depths of their hearts that without the shedding of blood there could be no remission. At any rate they were not cowards, these old doctors, they were perhaps lacking in technique as we might say, but they were not reeds shaken by the wind, they lacked hospital and laboratory advantages, but they did not lack the courage of their convictions. Many of us to-day do lack this very characteristic as shown by this very thing of jumping at conclusions.

We treat a case of appendicitis medically and it dies, so we hurriedly wash our hands of medicine in this disease. Perhaps a year afterwards we have another case and in great confidence we operate, but he dies too! The Lord only knows what we will do with our next.

What is the remedy?

Make it a penitentiary crime for any man

to draw conclusion who has nothing to draw from. Get back to the basal facts underlying the particular disease and on these build a plan of treatment in the light of the combined experience of the past. When a patient dies under a particular treatment always remember that perhaps after all it was the disease that killed him, and if the treatment was rational and sound, do not put it aside, but keep it up, not in a bull-headed way, but intelligently.

Let us resurrect the fundamental branches among the doctors, anatomy, physiology, chemistry, *materia medica*. How the very mention of them makes us shudder, yet it is only upon these that the real doctor may stand secure and firm.

Being rooted and grounded in these he will be certain and fixed in his diagnosis, in his treatment.

(These conclusions are drawn from a large number of cases and are trustworthy.)

QUACKS IN PENNSYLVANIA.

It may be interesting to note how they treat the newspaper doctors in Pennsylvania. "The Great Australian Healer," "Dr." Lewis H. Freedman, came into the town of Meadville, Pa., one day with a flaming advertisement in the morning paper of the wonderful cures he could make.

A committee from the county medical society had him arrested before he began business simply on the strength of the advertisement. The "doctor" employed one of the best lawyers in town who, on examining the law under which he was arrested, advised his client to make the best terms he could and quit.

According to the Pennsylvania Medical Journal for December, the statute under which he was arrested was one relating to "Itinerant Practitioners" and is known as the law of 1877, amended in 1897. The amendment, which is the business part of this law, reads as follows: "Section 4. Any person who shall attempt to practice medicine or surgery either for a valuable consideration or without any charge or remuneration therefor, by opening a transient office within this Commonwealth, or who shall, by handbill or other form of written or printed advertisement, assign such transient office or other place to persons seeking medicine or surgical advice or prescription, or who shall itinerate from place to place, or from house to house, and shall propose to cure any person sick or afflicted by the use of any medicine, means or agency whatsoever, either for a valuable consideration or without any charge or remuneration therefor shall, before being allowed to prac-

tice in this manner, appear before the clerk of the court of quarter sessions of the county wherein such person desires to practice, and shall furnish satisfactory evidence to such clerk that the provisions of this act have been complied with, and shall, in addition, take out a license *for each day* and pay into the county treasury for the use of such county the sum of ten dollars therefor; whereupon it shall be the duty of such clerk to issue to such applicant a proper certificate of license on payment of the fee of five dollars for his services." The penalty for violation of such law is from two to four hundred dollars.

And if he had taken out a license it would have been necessary to qualify under the regular medical laws of the State.

We congratulate our Pennsylvania brothers on their law and its application.

STATE LAWS AND THE PRACTICE OF MEDICINE.

The Medical Board of Nebraska recommended to the State Board of Health that the license of one "Dr." Oneal be revoked on the grounds of unprofessional conduct. "Dr." Oneal is an itinerant eye and ear specialist and gave promise of cure in all cases. The Board stated that it was hardly a question of medical ethics, but rather one of decency and self-respect, and so the gentleman's license was recalled.

We really have plenty of good laws scattered about through the country and the need of the hour is not so much for new laws as for courage in carrying out and enforcing those we already have without fear or favor.

The Medical Board of Nebraska is to be congratulated upon its work, and we hope that it will go forward.

The State Board of Medical Examiners of North Carolina have the power to revoke license for unprofessional conduct and it is certainly well that they are able to say not only who shall enter the regular medical profession of the State, but who shall remain there. Much of the charlatany in medicine develops after the doctor has been in awhile. He graduates from a good school, passed a good examination and is regularly licensed, but getting impatient at the slow growth of his practice, he begins to advertise and make claims. After he is once started the descent is rapid, he guarantees and makes a diagnosis by mail, then follows a month's treatment by express and the lost manhood department of the daily newspaper and the religious weeklies. Such men need the iron hand of the law, gloveless.

On behalf of the physician who is doing honest work, but is connected with the quack by the fact that they both hold the same license.

More especially on behalf of the unfortunate sick, who, by some mothlike fate, walk blindly though deliberately into the trap.

BOOK REVIEWS.

Sajous' Annual and Analytical Cyclopedia of Practical Medicine. Subscription entire series only. Six volumes; one every six months. Cloth, \$5.00; half Russia, \$6.00. Monthly supplements sent free during the three years. Philadelphia: The F. A. Davis Company. Fourth volume. Infants, Diarrheal Diseases of—Mercury.

The fourth volume of this most excellent work contains 622 pages, and includes articles upon subjects alphabetically arranged from "Infants, Diarrheal Diseases of," to "Mercury Chlorides," inclusive. This volume maintains the very high standard of its predecessors, and the wide range of subjects are most ably handled by men expert in their several branches. In the death of Prof. Geo. H. Rohe, of Baltimore, who had been connected with the Annual since 1891, it loses one of its brightest and most sincere contributors. One of Dr. Rohe's last contributions appears in this volume: a review on the subject of "Insanity," calculated to clearly define the practical aspect of the various mental disorders, not only for clinical purposes, but for the court-room. This article is typical of the man. He was an erudite scholar, and a specialist in several branches. The present article is characteristic in its thoroughness, and remarkable for its terseness. Our readers are by this time familiar with the arrangement of the work, and know from their own experience the comprehensive character of the articles contained in this publication. The opening article, a very timely paper, on the "Diarrheal Diseases of Infants," is from the able and competent pen of Dr. Blackader, of Montreal. During the coming summer months its great scientific value will, doubtless, be recognized. An elaborate paper on "Malarial Fevers," by Prof. James C. Wilson and Dr. Thomas G. Ashton, will also receive the great appreciation to which it is entitled. It may be highly commended to our readers as containing an excellent resume of the present state of our knowledge concerning the malarial parasite. This portion of the work is profusely illustrated. The article on "Locomotor Ataxia,"

by Dr. W. B. Pritchard, of New York; that on "Intubation," by Prof. F. E. Waxham, of Chicago; and that on "Diseases of the Liver," by Prof. Alexander McPhedran, of Toronto; that on "Meningitis," by Dr. Chas. M. Hay, of Philadelphia, are also entitled to special notice as models of their kind. In fact, all important medical topics, whose designations fall within the limits outlined, receive appropriate attention in this volume. The book is issued in handsome style. The illustrations are excellent and the typography of the highest order.

Operative Surgery. By Joseph D. Bryant, M.D., Professor of the Principles and Practice of Surgery, Operative and Clinical Surgery, University and Bellevue Hospital Medical College; Visiting Surgeon to Bellevue and St. Vincent's Hospitals; Consulting Surgeon to the Hospital for Ruptured and Crippled, Woman's Hospital, and Manhattan State Hospital for the Insane, etc. 8 Vo. 587 pages. With 749 Illustrations, 50 of which are in Color. New York. D. Appleton & Co., 1899.

This book is the third volume of Prof. Bryant's work upon Operative Surgery. Heretofore this work has been printed in one volume, but in this edition it has been entirely rewritten, rearranged and reset and so much enlarged that it has become necessary to divide it into two volumes. This volume includes a consideration of "The General Principles of Surgery; Antisepsis; The Control of Hemorrhage; The Treatment of Operative Wounds; The Ligature of Arteries; and Operations on Veins, Capillaries; The Nervous System, Tendons, Ligaments, Fasciæ, Muscles, Bursæ, and Bones; Amputations, Deformities, and Plastic Surgery.

The first chapter contains 52 pages and is devoted to general considerations, and is a clear, clean chapter. The next chapter takes into consideration the Agents for the Control of Hemorrhage. This is certainly one of the most important chapters in the book and should be studied from time to time by all physicians. This chapter is well illustrated, as are all the others.

In this work many new illustrations have been added, and the work as it now stands takes the highest rank. It is, in fact, unique in its excellence. To all of the subjects the author has given careful attention in the endeavor to cover the field in a thorough and complete manner. In this effort he has been greatly assisted by the increased number and much improved character of the illustrations, in making of which no expense has been spared; and the work in its present form stands alone as an

instructor for the student and a guide to the operating surgeon. The articles are of a most complete character and are discussed in a manner which for thoroughness leaves nothing to be desired. The mechanical execution of the volume is good. The two volumes of this book will enhance the already high reputation of the editor and the work will undoubtedly remain for years the standard one upon this subject.

Thorington, Refraction and How to Refract; Including Sections on Optics, Retinoscopy, the Fitting of Spectacles and Eye-Glasses, etc. By James Thorington, A.M., M.D., Adjunct Professor of Ophthalmology in the Philadelphia Polyclinic and College for Graduates in Medicine; Assistant Surgeon at Wills' Eye Hospital; Associate Member of the American Ophthalmological Society; Fellow of the College of Physicians of Philadelphia; Member of the American Medical Association; Ophthalmologist to the Elwyn and the Vineland Training Schools for Feeble-minded Children; Resident Physician and Surgeon Panama Railroad Co., at Colon (Aspinwall), Isthmus of Panama, 1882-1889, etc. Two Hundred Illustrations, Thirteen of which are Colored. Octavo. 301 Pages. \$1.50 net, Cloth. P. Blakiston's Son & Co., 1012 Walnut Street, Philadelphia, Pa.

This book contains 301 pages and is a most systematic and practical work. The author has so arranged the plan of the work that the student starting with the consideration of rays of light, is gradually brought to a full understanding of optics; and following this he is taught the standard eye, and then is given a description of ametropic eyes, with a differential diagnosis of each, until finally he is told how to place lenses in front of ametropic eyes to make them equal to the standard condition. The chapter on The Ophthalmoscope and its Uses is splendid; the sections on Emmetropia, Hyperopia and Myopia are also very fine. The chapter on Astigmatism comes next and is equally as well handled. The chapter on Retinoscopy embraces descriptions of that method of Refractory, both with the plane and with the concave mirror. The work is nicely illustrated, well printed and neatly bound, and it is with pleasure we recommend it to our readers.

A Text-Book of Embryology for Students of Medicine. By John Clement Heisler, M.D., Professor of Anatomy to the Medico-Chirurgical College, Philadelphia. With 190 Illustrations, 26 of them in Colors. Publisher: W. B. Saunders, 925 Walnut Street, Philadelphia. Price, \$2.50 net.

This book contains 405 pages and is not

only a most excellent text-book on Embryology, but one which has been needed for a long time. The author, recognizing the fact that students were seriously handicapped in this study of this work and the inadequate character of previous manuals of embryology, he went to work and now presents us with a text-book full enough to be intelligible, and yet without that minuteness of detail which characterizes the larger works. The author handles his subject in a masterly way and has so arranged the subject matter that it may be easily grasped by the student. In the preface the author says:

"The facts of embryology having acquired in recent years such great interest in connection with the teaching, and with the proper comprehension of human anatomy, it is of first importance to the student of medicine that a concise and yet sufficiently full text-book upon the subject be available. It was the aim of presenting such a book that this volume was written."

The author has written the book in a connected story-like style, making the subject very attractive and readable. The illustrations are remarkably fine and will greatly assist students in their study of what is generally a complete subject. The book cannot be too highly recommended.

Progressive Medicine. Volume IV. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D. Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Lea Brothers & Co., Philadelphia and New York.

This, the fourth volume of this excellent work, contains 408 pages. It considers diseases of digestive tract and allied organs, the liver, pancreas and peritoneum, genito-urinary diseases in the male, and syphilis fractures, dislocations, amputations, surgery of the extremities and orthopaedics, diseases of the kidneys, physiology, anatomy, hygiene, practical therapeutic referendums.

This work presents in a clear and original form all practical and useful advances made in every department of medicine and surgery during the year. Each section is treated from the pen of men whose reputation gives ample assurance of accuracy and completeness.

The section on fractures, dislocations, amputations, surgery of the extremities and orthopaedics, by Joseph C. Bloodgood, M.D., is a most excellent one and should be read and studied by every physician. The chapter on Hygiene by Henry B. Baker,

M.D., is of a very high order and worthy of special mention. You can see the personal impress of the contributor on every page. This volume maintains the high standard of excellence seen in the three preceding volumes, and we highly commend this quarterly review to all physicians who are desirous of keeping fully in contact with all advances constantly being made in the various departments of medicine. The publishers issue a most creditable volume in a heavy durable cloth binding.

A Double Thread. By Ellen Thorneycroft Fowler, Author of *Concerning Isabel Carnaby*, etc. New York: D. Appleton & Company. 1899.

This is the best novel that has been published in some time. We can recommend it without reserve. It is full of pith, wit and humor. It is clever and intensely interesting. It is nicely printed and well bound.

Transactions of the Iowa State Medical Society, Vol. xvii: Forty-Eighth Annual Session, 1899, Waterloo, Iowa.

This excellent Medical Society again presents its Annual Volume of Transactions in attractive form. The book before us gives the proceedings, the scientific papers, discussions and other important matters pertaining to the meeting of the Society. This Society gets out excellent transactions and it would not be amiss if other Societies would adopt their form and methods. The make-up of the book is due to the efficiency of the Secretary and a good printer.

Transactions of the New Hampshire Medical Society at the One Hundredth and Eighth Anniversary held at Concord May 25 and 26, 1899.

These transactions are well bound and printed and form a neat volume. They give very fully the proceedings of the Society, the discussions, minutes and all important facts pertaining thereto. Dr. Granville P. Conn, of Concord, is Secretary of the Organization.

LITERARY NOTES.

The offer has been made to seventeen of the leading universities of the country of the sum of two thousand dollars either in gold medals or checks, as the recipients may prefer, for the ablest presentation of the subject of "Modern Education: Does It Educate in the Broadest and Most Liberal Sense of the Term?" To this discussion many of the leading educators of the coun-

try, including President Gilman of Johns Hopkins, President Dwight of Yale, President Hadley of Yale, President Harper of Chicago University, President Andrews of Brown, have already contributed in the pages of "The Cosmopolitan." The debate is now transferred to the province of the student. A gold medal or check of one hundred dollars will be placed at the disposal of the students of each of the following universities: Yale, Harvard, Johns Hopkins, Michigan, University of Wisconsin, Princeton, Brown, Pennsylvania, Chicago, Cornell, Columbia, California, Leland Stanford, Jr., Notre Dame, Georgetown and University of Virginia. After these have been awarded, the successful contestants will be invited to meet at Harvard University before a board of judges of national reputation, and an award of three hundred dollars will be made to the student who shall present the ablest final discussion.

THE "NEW LIPPINCOTT" MAGAZINE FOR JANUARY, 1900.

The "New Lippincott" for January, 1900, begins the year with a complete novel, full of fresh sensations and amusing episodes, called "The Bread Line," by Albert Bigelow Paine. This is a tale of fun and love in New York's bohemia, beginning with New Year's night at the Model Bakery on Broadway, where some comrades encounter "The Bread Line," and ending there, after a year spent in trying to start a newspaper in a Bohemian studio. Love plays a signal part in redeeming the hero.

The significant series of stories on Mormon Life, by Mrs. J. K. Hudson, begins in this number with "The Third Wife." These should prove as useful a weapon against the renewed menace of polygamy as the expected Congressional action.

The short fiction will consist of three extraordinary stories by comparatively new writers: "Behind the Lines," a tale of social life in Washington, by Archibald Willingham Butt; "The Story of a Sky-Scraper," by Percie W. Hart, a tale of today in taller New York; and a charming fairy tale for Christmas, by Evelyn Sharp, a new London writer, entitled "In the Prince's Shoes."

Of timely papers there are many. "Art and the Camera," by F. Holland Day, is illustrated by an example of this master in a new field of art; Mrs. Crowninshield's description of the progress of the great Paris Exposition, under the title of "The Paris Fair in Outline, must attract both

those who are to visit it and those who are not; "An English Music Festival," by Thomas Whitney Surette, the popular University Extension lecturer, should appeal to his wide circle of hearers, as well as to all the musically inclined. The third paper by Ignota, in a series on English society, is entitled "English Political House Parties," and reveals much about the drawing-room side of recent political history in England. Dr. Theodore F. Wolfe, in "A Bookish Corner of New Jersey," talks about such interesting people as the Gilders, Dr. C. C. Abbott, "Clementine," the poetess, Thomas Dunn English, and others.

Charles G. D. Roberts contributes a quatrain called "The White Frost," and Theodosia Pickering Garaisson, a poem appropriate to the season, under the title, "Two Women."

Among the thirteen strong articles in the January Forum are found the following: "The Tariff a Live Issue," by Congressman Albert J. Hopkins; "German Art of To-day," by Ferd. Avenarius; "New Crimes and Penalties," by Hon. Samuel J. Barrows, United States Commissioner of the International Prison Commission; "A Living Profit and A Living Wage," by Edward J. Smith; "Some Defects of the Kindergarten in America," by G. Stanley Hall, president of Clark University; "Does Colonization Pay?" by O. P. Austin, Chief of the United States Bureau of Statistics, and "Wagner's Personality," by Gustave Kobbe.

The future of Cuba and Porto Rico, the Philippine question, financial legislation in the new Congress. Secretary Root's report, the British reverses in South Africa, and the recent progress of American municipalities are some of the topics editorially treated in the January Review of Reviews.

ABSTRACTS of the One Hundred Leading Articles of the Month.

Typhoid Ostitis.

Painter, in the *Annals of Gynecology and Pediatrics* for December, reports a case of ostitis of the hip and one of the spine following typhoid.

The rapid recovery from the acute bony process was sufficient to differentiate the condition from tuberculosis, and with the history of the typhoid so recent, he feels justified in calling them typhoidal in origin.

The Early Diagnosis of Tuberculosis.

Holmes in the *Denver Medical Times* for December says that the following symptoms are earliest to develop, loss of appetite; gastric or intestinal disturbance; dyspnea and fatigue on slight exertion; rapid and variable pulse; loss of weight and strength; insomnia; slight but persistent cough; pleurisy pains; afternoon or evening fever; subnormal morning temperature. He mentions the importance of blood examination in suspected cases but gives no exact method for determination.

He makes the following conclusions.

There are early symptoms which make their appearance in tuberculosis long before the stage of expectoration.

There is frequently expectoration for a considerable time before bacilli can be found.

The diagnostician who delays for the appearance of bacilli in the sputum loses the most valuable period for rendering service to his patient.

When the early symptoms are present and no other cause can be found to account for them, we are justified in suspecting tuberculosis.

Before arriving at a definite diagnosis we should consider well (a) the previous history; (b) the general appearance of the patient; (d) the symptoms present. After carefully weighing all that can be secured from such a study, we should also resort to early and repeated physical examinations of the chest; a bacteriological examination of the sputum—if the disease has advanced to this stage; a microscopic examination of the blood; and if doubt still remains we should resort to the tuberculin test.

It should be remembered that an early diagnosis is of supreme importance. If we hope to secure good results we must resort to means of examination which will enable us to detect the disease before it has become fully established.

Two other duties of great importance present themselves after making an early diagnosis; first, the choice of treatment; second, the prevention of contagion by adopting rigid sanitary and hygienic regulations.

In order to secure the co-operation of physicians on the one hand and the laity on the other, there should be state legislation. First—All persons should be made to realize the importance of an early diagnosis. Second—All persons should be better informed as to the means of communicating the disease.

A few sanitary rules should be formulated. For the violation of these rules there should

be specific penalties. It should be considered a crime for anyone to violate the rules adopted for the prevention of the spread of the disease, and such laws should be rigidly enforced.

Unless we are made to understand that it is a crime to endanger our neighbor, little heed will be given to advice and admonition on this subject. But if we are made to understand that such negligence and carelessness as is now prevalent is a punishable crime, it will result in diminishing the spread of tuberculosis; and furthermore, it will enable us to produce a greater percentage of cures by being able to detect the disease in its incipency.

Pathology of Tuberculosis.

Forcee, in the Pennsylvania Medical Journal for December, discusses this subject under four heads.

Description of the bacillus and its methods of infection, zoological and geographical distribution; histology and histogenesis of tubercle; pathological diagnosis and methods of examination of tubercular products.

She considers the large number of epithelioid cells, the spreading number of nodules or epithelial infiltration in connection with the life history of the bacillus as sufficient to distinguish tubercular from any other form of disease process.

To stain bacilli she mentions Frankel-Gabbet's method.

The question of immunity is not touched, though heredity is stated to be one of the most frequent and most potent causes in the production of tubercular diseases especially of the osseous forms.

Injuries of the Head.

Cooper reported seven cases of injury to the head before the Indian Territory Medical Association, in one of which the injury received in infancy caused death twenty-five years later.

Another case was one of insanity, trephined three years after injury with recovery.

The third and fourth cases were fractures of the base and contusion with recovery.

The fifth and sixth were compound depressed fractures, relieved by trephining.

The seventh was one of brain contusion, trephined, death.

He recommends guarded prognosis in all cases of head injuries.

Trephining he considers a simple operation, easily performed, and should be done, when demanded, as soon as possible after the injury.

Philippine Observations by an Army Surgeon.

McIlwaine, in the Pennsylvania Medical Journal for December, describes some experiences in Manila.

The regular physicians there, he says, have become infected with the bacillus of indolence, and allow things to rock along most any old way.

Among the diseases in the American army after the occupation, he mentions small-pox, dysentery, typhoid, malaria, measles, venereal diseases and others.

Dysentery was treated by copious salines, irrigation with warm water and nitrate of silver, bismuth 20 grains every 3 hours. In some cases the ipecac treatment was used, 30 grain doses preceded by 20 minims of tincture of opium. If rejected it was repeated in three hours and on second attempt the patient usually held it.

Operations in Appendicitis.

Hayden, in the Hot Springs Medical Journal for December, makes a plea for early operations in appendicitis. Admitting that we might operate in cases that would recover without the operation, he says that we do no particular harm and the patient is insured against a recurrence. He reports three cases showing the disease in its deceitfulness and danger unless surgical attention is given early.

His advice is to operate in all cases seen before perforation, even though they are ever so mild; operate in all cases that are seen after perforation, unless symptoms are present to lead one to believe that nature has closed the leak, or the patient is in such a state of collapse that he would be likely to succumb to the shock of the operation.

Malarial Infection as a Factor in Causing Eye Disease.

Vaughan, in the New York Medical Journal for December 16th, reports a case in which there was ptosis, congestion of the conjunctiva, dilated pupil, cloudy cornea, increase in ocular tension and vitreous opaque. The pain, which corresponded with the side of the head affected, was intense. The attack was introduced by supra-orbital neuralgia. All the symptoms appeared to become more aggravated at regular intervals, and during these exacerbations fever was always present.

Iron and quinine caused the attacks to cease entirely. Afterwards the ophthalmoscope showed nothing wrong except a slight opacity of the vitreous.

Leprosy.

Ashmead, in the Medical Age for December 10th, gives the opinions of Agnero and Garges in support of the theory that leprosy is contagious.

It is most by sexual intercourse that the disease is spread, and Agnero mentions the fact that it is possible for a woman to have connection with a leper and not contract the disease, yet she has power to give the disease to any who may have intercourse with her. Hence he sees in the regulation of prostitution a valuable agent in checking the spread of the disease.

The presence of the microbe under suitable conditions is sufficient to cause the disease, though the local lesion is indispensable, hence the contagion is not common and general as in small-pox, scarlet fever, or measles.

Trichinosis.

Blumer and Neuman in the American Journal of the Medical Sciences for January reports a family outbreak of trichinosis implicating two Italian families numbering in all nine persons. The source of infection was found to be homemade sausage made from odds and ends bought at a wholesale house.

There was practically no gastro-intestinal disturbance or muscular tenderness and the outbreak resembled very closely the form described by Renz as "insidious trichinosis." General muscular aching was present as an early symptom in all the cases.

The resemblance to typhoid fever was marked. Edema of the face was characteristic and prominent in all the cases.

Leucocytosis was present in all, varying from 6 to 24 thousand; also a great increase in the eosinophiles with a corresponding diminution in the number of neutrophiles.

Toxic Human Milk.

To explain the ill effects, sometimes observed in nurslings, of mother's milk Sanders and Fisch, in the Medical Review, December 16th, report some experiments which would go to show that in some cases there is present a toxic element.

In the first case it was found that the milk contained prototoxalbumose, the product of faulty metabolism.

In the other cases an alkaloidal substance was isolated though it produced elevation of temperature.

They consider the true explanation to be that the poison is elaborated by the cells under the influence of perturbed innervation.

Tracheal Shock in Aneurism.

Hall, in the American Journal of the Medical Sciences for January, calls attention to a new element in the diagnosis of aortic aneurism which he styles *tracheal diastolic shock*.

He states that Oliver's sign is important but it has been confounded with simple pulsation transmitted to the larynx, and only in a very small per cent. of cases will the distinct tugging be present without involvement of the aorta.

The author's sign is the transmission of the diastolic shock, originating at the time of the closure of the aortic valves, through the aneurism to the trachea. It is manifested by a distinct, sharp impulse following the tracheal tug at the same interval as that between the apex beat and the closure of the aortic segments.

This sign is valuable though the aneurism forms no external tumor, or if presenting such tumor, gives no diastolic shock, consequently the sign is important in the early diagnosis.

He reports four cases in which this sign was important in the diagnosis.

He well says that the crucial test of the value of this sign is in differentiating aneurism from solid thoracic tumor in cases not involving the chest wall.

Puerperal Infection.

Cartledge, in the American Practitioner and News for November 15th, reports a case of puerperal infection treated by hysterectomy with recovery.

The uterus was in a gangrenous condition and showed that it was impossible for the patient to have recovered without its removal.

He admits that we may expect a large mortality in such cases, but it remains the only course in some cases and we must have the courage of our convictions. Curetting in organic infection can do little good, irrigation being in most cases preferable to breaking up the endometrium and making fresh raw surfaces with the curette.

Deformity Following Excision of Knee.

The knee of a child should practically never be excised for osteitis says Taylor in Pediatrics for December 15th. Excessive shortening often follows from destruction of the epiphyseal junction.

He says we should rather use protective orthopedic treatment, as even in desperate cases, opening the joint freely and washing out with erosion when necessary will accomplish the objects of an excision and at the same time preserve the epiphyseal line.

The Operative Treatment of Urethral Stricture.

A satisfactory result of a stricture operation depends on an exact determination of the location of the stricture; the extent, quality and caliber of the constriction; accurate cutting and proper after treatment, says Kruessl in the Chicago Clinic for December.

He considers the *bougie a boule*, which is provided with a scale on its shaft, the proper instrument for determining a stricture.

The author uses a "localizer" which shows whether the stricture is anterior or posterior, or annular, and in this way we cut the stricture and not healthy tissue.

He says that internal urethrotomy is not indicated in callous strictures, especially not in those of $1\frac{1}{2}$ centimetres or over in length. The infiltrated areas surrounding the strictures should be reduced by sounds or electrolysis with a weak current, before urethrotomy is done, to avoid hemorrhage and urethral fever.

He recommends the Otis urethrotome for internal work, which is only practical for the anterior eight or nine centimetres of the urethra.

Profuse Diarrhea Following Laparotomy.

Levison, in the American Journal of Surgery and Gynecology for December, reports a rare condition following an operation for appendicitis, in which there was considerable manipulation of the intestines.

Twelve hours after the operation the patient passed a large fecal evacuation and in the four following hours he passed 18 large liquid stools.

The patient was addicted to the use of "yen she" (the ash prepared from opium for smoking purposes) and he admitted having taken some immediately after his removal from the operating room.

The author promises to further investigate the action of this drug in similar conditions.

Obstipation.

In the Columbus Medical Journal for November 20th, Taylor recommends division of the rectal valves as a sure cure for this condition. These valves are hypertrophied and mechanically prevent the emptying of the rectum fully and freely.

The operation is painless and may be done without an anesthetic and has no after troubles.

He reports several cases and himself among the number in which complete cure followed simple division of the obstructing valve.

The Contagiousness of Acute Suppurative Inflammations of the Middle Ear.

Lermoyez, in the Journal of Laryngology for December, brings forward much proof to show that this condition is contagious and that all such cases should be isolated.

His conclusions are drawn in part from seven cases that clearly point to the contagious nature of the trouble.

He says that given the first patient affected with influenza complicated with otitis, any other influenzal patient put in contact with him will run a great risk of acquiring this otitic complication.

He concludes that we must isolate the patients and especially the children affected with acute median otitis, even if it is primary, and still more if it is super-added as a secondary complication to an infectious disease.

The Stigmata of Hysteria.

Robinson, in the Western Medical Review for December, mentions the following, hyperesthesia and anesthesia of the skin and mucosa; hyperesthesia of the viscera; paresis or paralysis of one or more muscles; exaltation of the special senses as smell, hearing and taste.

Hereditary or congenital defect is a large factor. Sexual disease plays a vast role.

He says that hysteria has no more to do with the uterus than the liver or testicle and is not a gynecologic disease. It exists independent of nerve distribution, and its fundamental cause is heredity, the transmission of defects or a neuropathic condition.

The chief therapeutic agents are suggestions and limited galvanic electricity.

The sweeping removal of organs for neurosis or hyperesthesia is criminal.

The Treatment of Eclampsia.

Edgar in the Therapeutic Gazette for December says the preventive treatment is to first, reduce the amount of nitrogenous food to a minimum; second, limit the production and absorption of toxic material in the intestines and tissues of the body and assist in their elimination by improving the action of the emunctories; third, if necessary empty the uterus. The curative treatment consists in controlling the convulsions by chloroform, veratrum viride, morphine or chloral; in emptying the uterus under deep anaesthesia by some rapid method causing as little injury as possible to the patient and in the elimination of the poison or poisons which we presume caused the convulsions.

Parturition Among the Eskimos.

Gleaves, in the Pacific Medical Journal for December, tells us of the lying in chamber among the Eskimos in northwestern Alaska.

They cannot be confined in a house, but must go into the woods or brush alone—no one, not even the husband, being allowed to be present, and must remain there for five days with no food except a bit of dried fish.

When the five days are finished she returns to the house with her child, she and her husband take a bath and change their furs, if they have a change, and are supposed to be clean until the next confinement.

The author was permitted to see a woman in labor, she was out in the brush in a snow pit about two feet deep and six feet across, the thermometer being 30 to 40 deg. F. below zero; the floor of the pit was covered with dried grass, a reindeer skin with no covering of any kind.

During labor the woman was upon her knees with buttocks resting on her heels, she ligated the cord, with a piece of sinew from the back of the caribou, as close to the umbilicus as possible, and the cord was cut close to the ligature by means of a piece of serrated flint; she then washed the baby in the snow and put it under her dress. She then went to another snow pit fifty feet away, as the one where the babe is born is considered unclean.

Even under these circumstances he says their mortality rate will compare favorably with our own.

Hemorrhagic Malarial Fever.

Ryals, in the Alabama Medical and Surgical Age for December, recommends in the treatment of this form of malaria, mercury, salines, acetanilid or phenacetine, quinine and morphia. He says the quinine is best given hypodermically in the form of the bisulphate in 20 grain doses, two or even three times during the 24 hours. As soon as the fever falls the quinine can be continued in 9 to 12 grain doses.

In the chronic forms of this disease he says that quinine should not be given in large doses, as the blood is largely depleted.

In such cases he advises the use of Fowler's solution, strychnine, compound tincture of cinchona, and the cautious use of mercury, with quinine in 12 to 15 grains per day.

But if the case shows a tendency towards congestion, with marked periodicities of high temperature, with cold extremities, and a dingy hue of skin, it will have to be

treated with large doses of quinine, regardless of what may have been the previous history of the case, or regardless of what we may think of the condition of the patient's blood, because it is the only remedy that can meet that condition, and will certainly not do the harm in the blood, that this malarial poison, in the blood, capable of producing this congestive character, will do.

Tuberculosis of the Hip Joint.

Becker, in the Cleveland Medical Gazette for November, reports two cases of tuberculosis of the hip joint, illustrating in the one the benign form of the disease, treated conservatively for a period of fourteen months with a complete cure. The other was the malignant, rapidly destructive type of the disease, treated by resection with recovery and a good joint.

He emphasizes the importance of an early diagnosis, based upon a careful family and personal history, objective symptoms of muscular fixation, lumbar lordosis, temperature curve and disappearance of gluteal fold.

In the treatment immobilize the hip at the earliest possible moment after correcting the deformity preferably by the spica bandage. As soon as the abscess formation is a positive fact, enucleate the tubercular tissue, however extensive, with the appropriate after treatment of extension; fixation, passive motion and medication.

Generally the importance of out-door exercise, good air, milk and the best of simple wholesome food.

Conservatism in Pelvo-Abdominal Surgery.

McCalla, in a paper before the Idaho State Medical Society, says that oftentimes we are most conservative when we are most radical, and strongly urges the removal of all diseased tissue when possible.

He considers a part of the ovary as essential to perfect health unless diseased, and so conservative surgery should be done for them at all times.

In women under 40, a healthy tube on one side, and part of an ovary on the other, makes pregnancy possible.

In women over 40, we need not be so careful about saving the ovary.

He does not think much of the vaginal route. With such men as Kelly it is all right, but those less skillful should rather take the abdominal.

In acute pus cases he might drain through the vagina temporarily, but if removal was necessary later he prefers the abdominal operation.

Intratympanic Surgery in Chronic Suppurative and Sclerotic Conditions of the Middle Ear.

Ferreri, in the Laryngoscope for December, presents a review of the present position of intratympanic surgery in chronic suppurative otitis and in sclerosis of the middle ear.

Favorable results have been obtained in the suppurative forms, but the results have been rather indifferent in the non-suppurative. Failure in intratympanic operations depends upon general conditions, such as the presence of tuberculosis or ozena.

If the antrum and mastoid are affected the extraction of the ossicles can do no good. He states that it should be the rule not to proceed to operative measures as a result of suppuration until the latter has ceased for some time.

In a number of cases he concludes that the lesion of the ossicles, even though serious, was secondary to diffusion of inflammation which had primarily attacked the mucous lining of the tympanic cavity.

In regard to the sclerotic cases, we should try general treatment, especially if in the first stages, as thyroid tablets, or the intratympanic injections of jequirety or of digestive ferments.

One of the indications for surgical interference is the appearance of the morbid process in the other ear.

Surgical treatment is more effective when there is vertigo and paracusis as well as deafness. If there is no deterioration of hearing he advises simply extraction of the the malleus and incus for the relief of vertigo and paracusis. But if there is a decided diminution of hearing, an immediate temporary myringectomy is indicated.

Typho-Malarial Fever.

This fever is caused by a peculiar poison starting from decaying vegetable and animal matter, according to Shuman in a paper read before the Indian Territory Medical Association.

The duration he states is about four weeks and the fever may reach 103 to 106.

His treatment is cleanliness, first, last and all the time. As for drugs he banks on calomel, the sulpho-carbolates, and turpentine and when necessary, opium bismuth, spirits of nitre, lead and heart stimulants.

Buttermilk he considers the best diet about 2 quarts per day.

He describes three cases treated as typho-malarial fever but to a cross eyed man they look like the genuine and untrammelled work of the bacillus typhosus.

The Exploration of the Abdomen as an Adjunct to every Celiotomy.

In the Medical News for December 16th, Kelly makes a strong plea for exploring the abdomen whenever the abdomen is opened for any cause. In some cases the condition of the patient may contra-indicate any delay in closing the incision. But he mentions the following three classes of cases in which it should be done.

Firstly, those in which there has been no reason to anticipate any disease of any other organ and the examination is made simply as a routine procedure, whenever it adds nothing to the gravity of the situation. In such cases we are most liable to find unsuspected hydro-ureter, appendicitis, movable kidney, gall-stones and occasionally pyloric tumor.

Secondly, those cases in which on opening the abdomen, contrary to expectation no disease is found near at hand. The operator may then and it is of great advantage to enlarge the incision, introduce the hand and the forearm and explore the entire abdomen. He cited a case of this sort in which he made an incision over the appendix and finding no appendicitis, enlarged the opening and found a gall-stone within ruptured gall-bladder; also, another case in which gall-stones were believed to be present, but finding the diagnosis at fault, introduced his arm through the enlarged incision and found a large hematoma of the ovary.

Thirdly, the group of cases in which there is a definite percentage of chances that the disease discovered at the time of operation is completed by the affection of some other organ neighboring or remote. In cancer of the ovary he examines all the organs and in no small percentage of cases has the disappointment of finding metastases in the omentum pylorus, or liver. In pelvic inflammatory disease the appendix will be frequently found involved, and in the cases of pelvic tumors as well as inflammation the ureters are prone to suffer from compression.

The Treatment of Placenta Previa.

McCalla recommends the method suggested by Tait, hysterectomy. In a paper before the Idaho State Medical Society, he shows the excessive mortality of this condition, both for the mother and the child, and urges complete removal of the pregnant uterus as safest and best for both.

His experience is confined to one case treated by this method with complete recovery.

Surgical Treatment of Uterine Fibroids.

Baldy, in the American Journal of Obstetrics for December, says that hysterectomy is the operation of choice in fibroid tumors of the uterus and that myomectomy is only indicated where special reasons for so doing exists.

He recommends the abdominal route and the removal at the cervical neck.

He says the amputation at the cervix is better because it is applicable to all cases, a shorter operation, less manipulation, less traumatism, less liability to septic infection. The vaginal route he has no use for.

A myomectomy may be justifiable from the age of the patient, desire for children or the necessity of an heir.

But a myomectomy may not cure the pains, may not stop the hemorrhage, the tumors may recur, and the dangers of sepsis and hemorrhage are greater.

Of course, pedunculated fibroids of the cavity may be enucleated or amputated through the cervical canal.

He considers Martin's method entitled to a limited but growing place in gynecological surgery.

The question of surgical interference is largely one of health and future possibilities as the growth is benign. He is skeptical as to their being any greater danger of malignant degeneration in this region than in other parts of the body.

The question of health is largely determined by the pain, hemorrhage, rapidity of growth, size, pressure symptoms, recurring attacks of peritonitis, mental condition, and expediency.

The Blood in Chorea.

According to Murphy in the Kansas City Medical Record for December anemia does not enter into the production of this disease to any thing like the extent that has been claimed.

From a careful blood study in 8 cases with considerable study of the literature of the subject he says the blood of a patient suffering with chorea is in the vast majority of cases somewhat deficient in coloring matter and red cells. The anemia is of the chlorotic type, there being a greater proportionate reduction in hemoglobin than in the number of red corpuscles. Where grave anemia is present, complications usually explain this.

The movements have no relation to the condition of the blood. He says that anemia is not a direct exciting cause of chorea but the anemia is secondary to the chorea.

Neurasthenia.

Gray, in the Medical News for December 16th, divides the treatment of this condition into removal or amelioration of the cause; rest; suitable mental and physical tonics; and electricity.

As tonics he recommends iron, quinine, strychnine and beef.

Electricity he considers of great value, properly and carefully given from day to day. The skin and electrodes should be wet with warm water and not with salt and water as these corrode the metal and roughen the skin.

To give a galvanic current through the brain, one electrode measuring $5 \times 2\frac{1}{2}$ inches, should be put on the forehead, another measuring $7 \times 2\frac{1}{2}$ inches, on the nape of the neck and held gently but firmly in place. The current should then be turned on slowly by the regulator until two milliamperes are measured off on the meter, so gently that no flash of light will be perceived by the patient. Sitzings should last for two minutes at first, later five minutes, and then the current should be as gently withdrawn.

He states that in some cases massage seems to make worse or retard recovery, so that it must be used in selected cases only.

Shock Attending Parturition and Its Relation to Hemorrhage.

Shock from any cause is an active factor in the production of postpartum hemorrhages, says Root in the Woman's Medical Journal for December. In a case quoted, the forceps were applied without anesthesia and the placenta had to be delivered by hand, so there was a double shock as a cause for the hemorrhage.

She states that in shock the uterus is always relaxed. Anesthesia should be used in application of the forceps and especially during extraction.

In case of heart lesions she prefers ether to chloroform.

Tuberculous Ankylosis of the Hip Joint.

Wiener, in the Chicago Clinic for December recommends, if the ankylosis be fibrous, a hot bath once a day; permanent weight extension, and elastic constriction around the hip joint.

The operation should be carefully done under deep chloroform anesthesia when indicated. The resisting tendons being cut with the tenotome, and the joint slowly put into proper place without force and is immobilized in the corrected position.

The reaction following may be very lively and the after treatment must be carefully attended to.

Alcoholism in Its Relation to Heredity.

Reid, in Gaillard's Medical Journal for December, states that every drunkard has a marked capacity for enjoying alcohol and in addition a keen memory of the delights conferred by previous acts of drinking. This capacity for enjoying alcohol might be transmitted, but the memory could not be.

Races and nations he said craved alcohol in inverse ratio to their previous familiarity with it. Present day savages, who had never manufactured alcohol even in dilute form, when given the opportunity drank to extinction. Other savages, such as those of Africa, who had been able to manufacture alcohol in dilute form were much less prone to extreme intemperance than the savages of North America. He concluded then that the effects of intemperance as acquired by ancestors were not transmissible.

He did not approve of the temperance reformer's plan of abolishing drink as some other stimulant or narcotic, such as opium, would take its place as shown in the history of certain Eastern nations.

Physiological Common Sense and the Drinking of Alcohol.

Hughes, in the Medical Mirror for December, suggests a plan to diminish in some measure the drinking of alcoholics.

He is in full accord with Legendre's statement as to the hurt and harm inflicted by this agent.

The evil is to be met by substitution and avoidance.

By substitution he means that all places selling alcoholic drinks shall be required by law to also sell non-intoxicating drinks, as tea, coffee, cocoa, chocolate, etc.

He would abolish the bar or saloon as such and substitute in its place the sanitary cafe or Buffet where something to eat and drink besides an alcoholic might be had always at the choice of the drinker.

Another substitutive treatment is timely medication, for the craving give strichnia, bromide of soda or of ammonia and food. The nerve centers are tired and unstable when they crave alcoholic stimulants.

Treatment of Typhoid Fever.

Zwant, in the Kansas City Medical Index-Lancet, recommends the sulpho-carbolates of zinc and soda in connection with hydrotherapy if necessary for the temperature. He considers auto-intoxication as an important element to be combatted.

He says that the use of medicinal antipyretics is unsafe.

He concludes that the necrosis of the

lymphoid tissues of the bowels favors self-poisoning.

That the present day offers us no effective means of attacking the specific infecting agent.

That we can almost totally control auto-intoxication by the early use of antiseptics.

That the antiseptic is the only tenable medicinal treatment.

That the antiseptic treatment materially modifies the disease and, if resorted to early, shortens it.

That we have no safe medicinal treatment for the fever.

The Early Diagnosis of Tuberculous Joint Disease.

Ely, in the Medical Record for December 16th, gives some points in the early diagnosis of this condition.

He mentions as important the history, gradual development, chronicity, gradually grow worse, trauma, *pain* and *stiffness*, general condition, muscular spasm.

Patients should be stripped for examination.

The joints most liable in order of frequency of attack are: Spine, hip, knee, ankle, elbow, wrist and shoulder. Of the other joints exceedingly rare.

Let it be said that, after thorough examination of the case, if any doubt remains rest and a liniment should be prescribed, a positive diagnosis should be withheld, and the case kept under observation for two or three weeks. A diagnosis of "growing pains" may be disastrous, and nothing is lost by a short delay if the child is kept quiet.

Cancer.

Taylor, in the Georgia Journal of Medicine and Surgery, speaking of cancer in general emphasizes the importance of an early diagnosis, and urges the general practitioner, into whose hands these cases first come, to be more careful in their treatment and more painstaking in their examination.

He quotes Hughes that neural overstrain has a causal relation to cancer. The occurrence of cancer subsequent to trauma, contusions, wounds, fractures, burns, etc., is significant.

He believes the microscope should reveal the incipient changes in this dread disease, and our microscopists should, if possible, give us more light yet.

He considers the microbic origin as having had much to sustain it in the past few years and we are nearer a solution of this vexed problem than ever before.

The Alexander Operation in Retrodeviations of the Uterus.

Taylor, in the Richmond Journal of Practice for November, says that he can not understand why hernia should follow this operation any more than it should a Bassini, as they are practically the same. So then this objection against the operation does not hold water if the operator knows what he is doing. He claims that the operation is easy of execution, is attended by a mortality that is nil, and it remedies in a most satisfactory manner morbid conditions existing, and prevents those reasonably prospective.

The Effect of Certain Occupations on the Pharynx.

Oppenheimer gave a study of 50 cases before the New York State Medical Association to determine the effect of certain occupations on the pharynx.

They were divided into two classes, first, occupations characterized by temperature elevation and the presence of excessive amount of fibres and dust in the atmosphere as in mill hands, some hat manufactures, tailor, baker, fireman, carpenter and dress-maker. There were 39 in this class.

The second class was characterized by the presence of an excessive amount of deleterious chemical agents (acid fumes) in the respired air, this class contained 11 patients, hatters, tinsmith, laundress and dyers.

After a careful study he offers the following suggestions:

The pharyngeal mucosa of the mill hand under 20 years of age, is more susceptible to unfavorable influences than is that of the individual over this age.

The inhalation of dust, fibers and chemical agents are the factors of most importance.

The majority of industrial workers are affected with pharyngeal disorders, dependent, to a certain extent, upon their occupation.

In those already affected with pharyngitis before assuming these occupations, the morbid changes are augmented by the work.

The primary pharyngeal changes are those of acute congestion and inflammation. Chronic changes are the ultimate result.

The pharyngitis produced in part or whole by the occupation does not differ in any respect from the ordinary forms.

Provided the nasal chambers be in approximately normal condition, pharyngeal affections are much less liable to occur than otherwise.

Hygienic measures applied to the envi-

ronment of the worker, are of vast benefit as regards the improvement of his general condition and therefore of the upper respiratory tract.

As regards the prevention of catarrhal affections of the upper respiratory tract, daily washing with an inexpensive alkaline, antiseptic solution will be of much value; this should be done morning and evening and during working hours a few drops of any of the refined petrolatum oils, should be placed in each nostril. This procedure has been followed out in a number of cases among weavers, etc., and most gratifying results have been obtained.

Eclampsia.

Brigham, before the Vermont State Medical Society, stated that eclampsia occurred in about one per cent. of his cases extending over a period of twelve years.

He considers the disease a toxemia and that is always accompanied by some failure of the eliminative organs.

And this failure is manifest for days if not for weeks or months, consequently the treatment is preventive and curative, the former being by far the most important.

As indicative of the pre-eclamptic state we must look to other things besides the kidneys. High arterial tension, headache, gastric disturbance, physical and mental lassitude and failure of the bowels, liver, skin and lungs to properly perform their functions are most important symptoms.

For the attack he uses veratrum viride in 30-drop doses, morphia one-half grain and chloroform. He reports several cases and concludes that veratrum viride is the remedy par excellence in this condition. The morphia may or may not be necessary.

Pus Involving Pelvic Viscera and Adjacent Structures.

All pelvic abscesses should be opened nearest the pus, through the vagina if situated low or by going through the abdominal wall if situated high, says Bogart in a paper before the Tri-State Medical Society of Alabama, Georgia and Tennessee.

He believes first in conservative treatment, and if this fails the most thorough surgical course.

Most any surgeon can remove organs, but it requires a skillful and painstaking one to save them in many cases.

He considers the diseases involving pelvic viscera, the result usually of gonorrhea, the most potent causes of ill-health in our women of the present day.

Hydrorrhœa Gravidarum and Hydrosalpinx.

In a paper with this title read before the New York State Medical Association, Cowles directs attention to the possibility of an hydrosalpinx or a pyosalpinx succeeding or even coexisting with attack of hydrorrhœa gravidarum.

He reports two cases of his own, the first case had four or five attacks of hydrorrhœa, the last attack bringing on a miscarriage at about the 6th month. She had some sepsis following and later developed a pyosalpinx.

The second case had several attacks of hydrorrhœa, but went to term and was safely delivered of a healthy child. The hydrorrhœa continued after labor, coming on regularly once a month just before the menstrual flow and continued through a second pregnancy. In one of her attacks after the first labor a consulting surgeon made a diagnosis of appendicitis, but a day later with the gush of fluid from the vagina, the tumor, pain and temperature disappeared.

In this case he thought the glands of the fallopian tubes were also at fault, as the disease persisted after pregnancy had terminated. Hydrorrhœa gravidarum he does not consider such a rare disease, as many cases are doubtless supposed to be but the escape of amniotic fluid prior to confinement,

He emphasizes the fact that the surgeon who operates or advises operation for appendicitis in a woman, without a thorough exploration of the pelvic cavity by vaginal and rectal touch is guilty at least of negligence.

Differentiation Between the Bacillus of Syphilis, of Tuberculosis and the Smegma Bacillus.

Dahms, in the *Corpuscle* for November, says that neither Lustgarten's nor De Giacomini's methods of staining will differentiate the bacillus of syphilis from the smegma bacillus, but recommends instead the method of Dontrempont.

To differentiate between tubercle bacilli and smegma bacilli he considers Dorset's method more rapid than that advocated by Bunge and Trantenratte and equally reliable.

The following facts should be kept in mind:

Smegma bacilli do not occur in internal lesions.

Lustgarten's bacilli are not known to have ever occurred in sputum, although if syphilitic lesions exist in the respiratory

passages or mouth, and these lesions contain Lustgarten's bacilli, it must be admitted that the mixture of the latter with the sputum is not possible.

As first stated by Fränkel, sputum containing a large proportion of myelin and fatty acids is apt to contain smegma bacilli, but these are not usually numerous. In other varieties of sputum their presence is exceedingly uncommon, and the possibility of finding smegma bacilli can be reduced to a minimum by a thorough brushing of the teeth, washing out of the mouth, and gargling of the throat, preferably with a solution containing a small amount of alcohol or sodium bicarbonate previous to the expectoration of the sputum to be examined. In fact it may be regarded as doubtful whether smegma bacilli ever occur under these circumstances in sputum which does not possess the qualities mentioned.

Smegma bacilli do not occur in urine obtained by catheterization after thoroughly cleansing the urethral orifice.

In hundreds of preparations examined it was never possible to find a single smegma bacillus showing in a typical way the sharp curve near one extremity which is so frequently observed in tubercle bacilli!

Localities of Continued Fever and Prevention.

According to Cordle, in a paper before the Tri-State Medical Society of Georgia, Alabama and Tennessee, this fever is most prevalent in East Tennessee and the mountains of North Georgia.

He says the infection of this disease is contained in the stools and possibly in the urine during the whole period of illness.

The virus is transmitted from the sick to the healthy, chiefly by means of drinking water, milk, vegetables and possibly through the air.

Our duty, then, is mainly in regard to the water and milk supply and whenever called to see a case, they should be investigated at once and if possible remedied.

Educate your people in personal and general hygiene.

Pyorrhœa of the Maxillary Sinus.

Nourse reported a case of persistent pyorrhœa of the maxillary sinus to the Idaho State Medical Society which was finally cured by the application of nitrate of silver. Free drainage and antiseptics were used freely, but to no avail and the discharge continued until the cavity was swabbed out with a ten grain to the ounce solution of nitrate of silver, when the case made a rapid recovery.

Operative Treatment of the Nose and Throat.

Cramton, before the Vermont Medical Society, gave some excellent reasons why operative conditions in this part of the body should not be neglected.

He admits that the family physician is inclined to put too much faith in gargles and sprays while the patient is made miserable by the presence of polypi, hypertrophy, enlarged tonsils or adenoids that demand operative intervention.

He mentions a number of troubles of the nose, of the eye, pharynx, larynx, bronchi, skin, alimentary tract, heart, muscles and even the brain and nervous system, some of which are due to the direct effect of obstruction and others to relex manifestations.

He strongly urges every physician, even those in the country, to examine carefully all children that are reported as "snoring at night," as "getting deaf," as "having the past year been dull at school," and if enlarged tonsils and adenoids are found *remove* them.

The author cites a number of cases emphasizing the importance of this subject.

Some Medico-Legal Aspects of Railroad Injuries.

This subject must be considered from three points of view, from the standpoint of the physician, the claimant and the railroad, says McCormick in a paper before the Medical Society of the District of Columbia.

The first objective is the determination of the nature and degree of injury, and this only be done by a complete and painstaking examination.

He holds up the average expert testimony as being simply a matter of the highest fee or which side is paying, and urges that this condition of things should be remedied.

To avoid bias he recommends that if the physician is employed by the claimant, he should view the matter from the railroad's point of view, and if employed by the railroad then from the claimant's point of view.

It is natural that the claimant should have an exaggerated idea of the magnitude of his injury, the surgeon must oftentimes determine what is true and what is false.

He then considers the cases thrown into court as of one of three classes, first, those in which liability for damages is disputable; second, where amount of liability for damages is disputable; third, where fraud, deception, or malingering is employed.

He gives several cases illustrating the different forms and concludes that the nervous affections resulting from accidents on railroads do not differ essentially from those

produced by other causes capable of producing a like degree of impression on the nervous system.

That traumatic neurasthenia does not differ from other kinds, but is a term used simply to designate the manner of its production. That in all cases where the subjective symptoms are disproportionate to the lesion care should be exercised in advancing an opinion based upon *one* examination. That many genuine cases develop neuroses a long time after the injury, which are not apparent at the time of the accident.

Empyema in Infants.

Bovaird, in the Medical News for December 23rd, says that the pathological records of the New York Foundling Hospital in the last ten years shows a total of 82 cases of empyema.

Of these 69 were under two years of age, 42 being in boys, 27 in girls.

The right side was involved in 28 cases, the left in 24, both sides in 17.

After a careful study of these cases he emphasizes the following points:

Empyema is not uncommon in the first two years of life, and even in the early months. Of the 69 fatal cases on our records 11 occurred in children under six months of age, 40 occurred in children between six months and one year, and 18 occurred in children between one and two years. The youngest patient was two months and nineteen days old.

The mortality during this period is very high.

Empyema in infants is very frequently mistaken for pneumonia.

The rational signs are the same as those of pneumonia in children.

The physical signs cannot be relied upon for diagnosis.

Exploration is called for in every case in which, with the rational signs of pulmonary disease, we find marked dullness or flatness over any part of the lung, especially if accompanied by diminution or absence of voice and breathing or displacement of the heart.

That exploration should be made with a large needle and repeated if necessary. None of our cases has ever shown harm from the use of the needle: many have been missed by reason of failure to use it.

Practically all pleural effusions in infancy are either purulent from the beginning or soon becomes so.

When pus is found drainage is called for. Incision in an intercostal space with the insertion of drainage tubes answers this end thoroughly.

The Immediate Hermetic Sealing of Wounds. Is It Safe? Is It Advised?

Dr. Marcy presented a paper with this title at the recent meeting of the Southern Surgical and Gynecological Association.

A paper upon wound technic by Dr. Marcy, of Boston, will be read by the profession with more than ordinary interest, when we recall that he was Mr. Lister's first American pupil and was the first in America to make careful laboratory studies upon the bacteria of wounds. Dr. Marcy and Surgeon-General Sternberg were the pioneers in this important field of research, which has done so much in revolutionizing medicine and surgery.

Perhaps Dr. Marcy's most important contribution to surgery is the buried animal suture, desirable as the legitimate sequence from the ligation of arteries in continuity by animal structures, first by Dr. Jameson, of Baltimore, in 1827, and later rediscovered and placed upon a sure scientific foundation by Lord Lister. Based upon the practice of closing aseptic wounds by buried continuous sutures, Dr. Marcy advocated the abandonment of the drainage-tube more than fifteen years ago, as not alone superfluous, but positively dangerous in all aseptic wounds, as the "open door" of infection. From this came the legitimate deduction, that nature's vitalized secretions were important to be retained in septic wounds, as the first process of their separation. This accepted, the only object of subsequent dressing of such a wound is to prevent infection from exterior sources. This Dr. Marcy believes is best accomplished by the use of the collodion seal. He reviews with care the modern technic of operative surgery and refers to recent valuable papers published in England by Dr. Granville Bantock, of London, and Dr. George Wilson.

The key-note of both these papers is that the constant presence of micro-organisms, now usually regarded as specific causes of disease, is associated with the disease, only because they here find the conditions necessary for their development. That is to say, that their presence is the result rather than the cause of the pathological condition found. "The surgeon must not alone be a scientist, which includes the familiarity of a technic to be carried out with the antematism of a well-mastered ritual, an equal familiarity of the anatomy of the parts and their relationship, but to this should be added other almost equal acquirements, that of the *artisan* and the *artist*. There is no excuse for bungling over wounds by the hour, devitalizing their structures by the

application of dozens of strong forceps, leaving tissues shreddy and half disorganized, all done in a so-called painstaking attempt at aseptic technic; and, on this account, comes the well-merited, impatient protests of great surgeons like Dr. Bantock, with a justification for the appeal, that the *soil* is as important as the seed in every surgical procedure." * * * "Very possibly this paper could not have been written had not a recent visit to a number of the leading hospitals in America demonstrated to me that unscientific and very objectionable methods of wound treatment were still the routine practice of many surgeons." Dr. Marcy gives an illustrative case, the operative cure for inguinal hernia on a small boy, where bandage after bandage was applied and finally *splints* from knee to navel. When asked of the distinguished surgeon their value, the reply was, "Doubtful, if any, but it has long been the practice in this hospital."

The object of the surgeon is to make and maintain a wound aseptic. Like structures, should be coaptated and held at rest by buried aseptic, absorbable sutures, and the technique is complete in the application of a dressing to prevent subsequent infection. "This is secured so simply and easily by iodoform collodion, strengthened by a few fibers of cotton, that this dressing reaches an ideal completion. It is *fluid-proof* in that no exudate can escape from beneath it, and, as a consequent, it is *germ-proof* in that by no means is it possible that any foreign material can enter the wound. Beyond this it holds in even coaptation and at rest with a certain fixity of support the approximated parts," * * * "Iodoform is soluble in it and under certain conditions is inhibitory to the development of the micrococci albus in the proliferating epithelium, and for this purpose is quite as valuable as the silver salts, which are much more difficult of application. To one who may doubt the effect of a potent agent seemingly locked up in a collodion film, we need only to cite the powerful dessicating effect of cantharidal collodion. A wound made and maintained aseptic in well vitalized structures, held at rest in easy coaptation by buried tendon sutures, and sealed with iodoform collodion, will not suppurate and will be followed by a non-inflammatory primary union." * * * The fear, anxiety, the constant supervision and watchfulness of the wound by nurse and attendant are entirely abrogated.

Subsequent dressing is of no avail except to keep the parts from extraneous injury. The work of the surgeon for good will have

its finality at the primary period of manipulative intervention."

Surgery of the Bile Passage.

In the Boston Medical and Surgical Journal for December 28th, Halsted reports a number of cases of operations about the bile ducts.

The first case was one of duodenal stenosis from gall-stones, dilatation of the stomach and duodenum with duodenal ulcer giving rise to dissecting abscess.

Patient died on the 3rd day after operation.

The second case was primary carcinoma of the duodenal papilla and diverticulum of Vater successfully removed by operation, a cystico-enterostomy being performed three months later.

The next case was dilatation of stomach and duodenum, gall-stones in bladder and cystic duct with obstruction and hydrops vesicæ. Four weeks after operation patient discharged cured.

The next case suggested a new operation with a name too long for this issue, as no continued articles are allowed.

The next case was one in which cholecystectomy was performed twice within four-and-one-half months with complete recovery.

The next case was treated by a cholecystostomy with good results.

The next case reported had discharge of pus and blood by mouth and rectum during severe gall-stone attack. Two years later adhesions were so extensive and so dense that the common duct was reached by a retroperitoneal route over the right kidney with the very best results.

Splenic Anemia.

Osler, in the American Journal of the Medical Science for January, reports 15 cases of idiopathic enlargement of the spleen with anemia, which he designates splenic anemia. Twelve were male and 3 female, all above the age of 35 except a girl of 11. Only 4 had malaria. Important features were, long duration, enlargement of spleen preceded the anemia, hematemeses, ascites in 3 cases, no special enlargement of the lymphatics, high blood count, low hemoglobin and leucocyte count.

The differential diagnosis will take into consideration pernicious anemia, splenic leukemia of certain cases, Hodskin's Disease with enlarged spleen, cirrhosis of the liver with enlarged spleen, alcoholic cir-

rhosis, syphilitic cirrhosis, and hypertrophic cirrhosis.

The treatment is that of the severe types of anemia. Rapid improvement may follow iron, arsenic, sunshine and good food.

In chronic cases with recurring hemorrhages the question of removal of the spleen should be considered.

Flagellated malarial Plasmodia.

Craig, in the New York Medical Journal for December 23rd, describes two varieties of this organism, the active plasmodium of tertian fever and the passive kind found in estivo-autumnal form.

From his study of the subject he concludes that the flagellate body is not degenerative, but rather a very highly developed vital form of the plasmodium of malaria, and that these forms are calculated to preserve the life of the parasite outside human economy because they arise only when the blood has been exposed to external condition. Consequently this process is another proof of the extracorporeal existence of the malarial parasite in another form.

Abdominal Surgery in Private Houses.

Hamilton, in a paper before the Tri-State Medical Society of Alabama, Georgia and Tennessee, says that surgeons have trouble with patients in private houses because they do not take the pains they would take in a hospital. And so to do good surgery even in private houses it is only necessary to be very careful in every detail.

Bring your instruments sterilized, don't let the room be swept the day of the operation, find something clean to boil water in, see after things yourself, never allow but two parties, possibly three, to enter the room for the first seven or eight days after an operation.

He reports several cases operated on at private houses that did well.

Gall Stone.

Schröder, in the Inter-State Medical Journal for December, reports three cases of gall-stone and in only one could he get the patient's consent to operate.

His first case passed from his hands on refusing surgical aid and died promptly under homeopathic treatment.

He advises operation in all cases of gall-stone colic where the jaundice lasts four weeks, in all recurring attacks followed by fever and when the gall cyst is enlarged during the attack and in all cases of constant enlargement of the gall bladder with or without jaundice or fever.

Cystinuria and Its Relation to Diaminuria.

A case of this exceedingly rare disease condition is reported by Simon, in the American Journal of the Medical Sciences for January, in which the diamines could be isolated from the urine.

He also mentions three other cases occurring at the Johns Hopkins Hospital though no examination was made for the diamines.

The author states that the diaminuria is neither the cause nor the effect of the cystin in the urine, but both are merely symptoms indicating a general disturbance of the normal metabolism.

All the tissues may be concerned in the metabolic retardation, but it is likely that the liver plays the most important role, as in this organ the greater portion of the sulphur bodies is formed.

Banman's method was used in his examinations.

He calls attention to an important point in examining for the diamines, that it may be necessary to repeat the process of purification several times before crystallization begins.

The Abortive Treatment of Gonorrhea.

Hutchinson, in his Archives of Surgery for October, says that a two-grain-to-the-ounce solution of chloride of zinc will certainly cure a case of gonorrhea in a short while and without danger.

He thinks the use of injections prevents orchitis rather than causes it.

His plan is to instruct the patient to first void his urine, then inject with warm water, let it run out and then use the solution.

This abortive treatment also tends to prevent gonorrheal rheumatism.

In addition to the chloride of zinc injection he gives all his cases purgatives and the bromide of potassium and insists upon a light diet.

Intubation in the Adult.

Waxham, in the Colorado Medical Journal for December, reports a case of acute inflammatory thickening of the mucous membrane of the larynx with sub-mucous infiltration, in which it was necessary to intubate the larynx to avoid death from suffocation.

The tube was worn for twelve days, the relief being immediate and permanent after removal.

There was absolutely no history of syphilis and the case was not tuberculosis.

The Nerve Mechanism of the Pelvis and Associated Regions.

Robinson, in the December number of the Journal of Orificial Surgery, concludes an excellent article on this subject.

While this mechanism is very complex, still its fuller study may aid us materially in the treatment of disease conditions.

He shows the harmony of the motor nerves of the skin, muscles, and viscera, thus explaining the efficacy of massage in constipation.

The sensory relation of the skin and underlying viscera is also intimate and this fact is useful in mapping out areas of anesthesia or hyperesthesia of the abdominal wall.

He says that the stomach is one of the chief organs to suffer reflexly from diseased genitals through the direct route of the hypogastric plexus. Practically the sacral plexus terminates in two branches, the pudic supplying the genitals and the sciatic supplying the limb.

The sympathetic nerves are also very important, being distributed to vessels, glands and viscera.

He states that the abdominal brain presides over nutrition, controls circulation, and gland secretion, presides over the organs of generation and influences in a dominant way the automatic visceral ganglia.

The Government Sanatorium for Consumptive Soldiers.

Bullock, in the Medical News for December 23d, writes of the sanatorium lately established by the United States Government at Fort Bayard, New Mexico, for the treatment of officers and enlisted men of the U. S. army, suffering from pulmonary tuberculosis.

The patients are carefully and plainly taught that the disease is infectious, and great care is exercised in the disposal of expectoration. The spitcup is used all the time and the sputum burned.

They are instructed to stay out doors as much as possible, to go to bed early, to take moderate exercise, to eat slowly and masticate thoroughly, and to refrain from coughing at meal times.

Stimulants and cigarets are forbidden, but they are allowed to smoke and chew in moderation.

Whiskers and moustaches if worn must be closely trimmed.

The climate of Fort Bayard is ideal, its elevation is 6040 feet with constant motion of the air, the total rainfall is less than 15 inches a year.

The Prognosis and Treatment of Nephritis.

Hare, in the *Therapeutic Gazette* for December 15th, says that as a rule the prognosis of acute diffuse nephritis is quite favorable.

He advises mild alkaline diuretics, copious draughts of pure water and purgatives, with hydrotherapy, such as cold sponging and friction, remembering the importance of friction in connection with cold water.

In the chronic forms the onset is so insidious prophylactic measures can rarely be instituted and the treatment will be dietetics and symptomatic medication.

In regard to diet, unless the patient is markedly gouty, he may have a liberal, if it is easily digested diet.

In chronic parenchymatous nephritis, if the administration of eggs and meats increases the albuminuria they should not be given, otherwise they may be of benefit.

A mixture of bitartrate of potassium and infusion of juniper berries is an old but valuable diuretic combined with digitalis or strophanthus if the heart is unduly feeble.

Iron, purgatives, hot air baths or hot pack are of decided benefit.

The medicinal diaphoretics he does not think of any value.

Saline solution and venesection are often of advantage.

Morphine may or may not be given, depending on the individual case.

Epithelioma of the Lip.

Dowd, in the *Medical Record* for December 23d, makes a very reasonable and timely plea for more thorough work in operating for epithelioma of the lip.

He describes the submaxillary part of the operation in which the submaxillary gland is exposed and its neighborhood carefully searched for any infected lymph nodes.

He states that these lymph nodes may be infected, though the growth on the lip is very small, and that infected nodes cannot always be detected by feeling with the finger. So at least three localities should be explored, first, the region above the anterior part of the submaxillary salivary gland; second, the space under the chin between the anterior bellies of the two digastric muscles; third, the region beneath the border of the jaw about the posterior part of the submaxillary salivary glands. If these be decidedly affected then the region of the internal jugular vein should also be explored. The incisions should be made beneath and parallel to the lower border of the jaw. The wound may be closed with the subcuticular stitch with a small opening in the center for drainage.

Gonorrhea in Women.

Clark, in the *American Journal of the Medical Sciences* for January, makes a critical summary of recent literature on this subject, though his study appears to have been confined exclusively to the writings of Bumm of Basel.

He considers Neisser and Bumm the epoch makers among the investigators of this disease.

The varying virulence of the gonococci is dwelt upon, though this peculiarity is shared by other germs and is perhaps more dependent on environment than character.

Noeggerath states that this disease is, as a rule, a life time affliction in woman, but Bumm says not.

The pathological anatomy is most logically and vividly described by Bumm.

He says that the disease is confined to the epithelial layer, Wertheim and Madlener to the contrary notwithstanding.

Bumm also states that the peritoneum is a very poor culture ground for the gonococci and that a general peritonitis cannot occur from this source, though the cases reported by Cushing show that the gonococcus was the primary cause of a general peritonitis. The clinical course, diagnosis, prognosis, and treatment, according to Bumm, will be continued in the next number of the *Journal*.

The Food Problem of Infancy.

Each infant must at its advent into the world face two destroying faces—*starvation* and *poisoning* says Band in the *Maryland Medical Journal* for December 23d.

And starvation does not mean the withholding of food but that more subtle form which follows the use of indigestible food or an insufficiency of food.

The child may be facing starvation and poisoning in the same food as improper food is not only lack of nourishment but poison.

Only infants nourished fully by healthy mothers are wholly safe.

Fresh cow's milk he considers the best substitute. Manufactured food or home preparation may be of value in certain cases but their prolonged use is to be permitted with reluctance and watched with care.

Rickets and scurvy are the two nutrition diseases of infants though many are treated month after month for "rheumatism," "paresis," "spinal paralysis," etc., until death or a change in the diet brings relief.

He concludes with a plea for play-grounds and recreation for older children and the abolition of the deforming labor of children in factories and mines.

Suppurative Ethmoiditis.

In a paper before the New York State Medical Association, Milburg said that the treatment of this condition consists in thoroughly cleansing the nasal cavities with some antiseptic solution, removing all obstruction to free drainage. Among such are found deflected septi, hypertrophies, spurs, polypi, etc., which may demand surgical interference.

The wholesale removal of the turbinates, as practiced by Weakes, is absolutely uncalled for, as is proven by most of the leading rhinologists of the world. Recent cases respond rather quickly to treatment, but those of two or more years' standing are extremely obstinate, and he is doubtful if they ever get entirely well, no matter how cautiously handled. This seems to have been the experience of most men.

He reports three cases out of thirty-nine in which cleansing with free drainage was the principle of treatment.

Disinfection with Formaldehyde Gas.

Fairbanks and Grawitz, in a continued article in the Boston Medical and Surgical Journal for December 14th, give the results of some experiments upon the disinfection of rooms in the city hospital at Charlottenberg, Berlin.

The apparatus used was the ordinary alcohol lamp and cup instrument of Schering. The formaldehyde tablets are used in this instrument instead of the aqueous solution.

Pieces of material were used infected with anthrax, diphtheria, typhoid, staphylococci. The results were entirely satisfactory, as cultures from all remained sterile.

The Prevention and Treatment of Puerperal Eclampsia.

The convulsions or fits may be readily controlled by chloroform, large doses of morphine, veratrum viride or nitrite of amyl says Davis in the Therapeutic Gazette for December 15th. But the condition which produces them is the main thing and this condition is the circulation of poisons in the blood of the mother and fetus.

These poisonous substances form in all pregnant patients and in the unborn child, but are promptly excreted by the kidneys, liver, intestine, skin and lungs.

In making a diagnosis of the accumulation of these poisons we examine the urine for solids and kidney debris remembering that the urine may be negative and the patient be in danger. Other guiding symptoms are headache across the brow, melan-

cholia, stupor, variation in appetite, lack of proper secretion in the skin, and constipation.

Diet is very important. He recommends milk, bread and butter, green vegetables, and fruits with plenty of pure soft water.

Warm tub bath at night, thin wool from head to feet, fresh air, no constriction of abdominal viscera, gentle exercise.

Keep the large bowel emptied.

Calomel in one-fourth grain doses night and morning a valuable drug.

Hay Fever.

Carpenter in the Cincinnati Lancet-Clinic for December 23d, tells of hay fever, its resorts, the victims and their late convention and the present status of the disease.

The white mountains especially at Bethlehem is the most noted resort and has been found about infallible as a preventive.

The United States Hay Fever Association was organized by Henry Ward Beecher and meets in Bethlehem annually, the twenty-fifth anniversary being celebrated this year, she estimated that there are 200,000 hay fever feverites in the United States with the number steadily increasing.

As to remedies, Mr. Beecher's testimony was that there was only one cure and that was to be covered with six feet of earth. She says the testimony of hay fever itself if set to a familiar tune would be "cures may come and cures may go, but I go on forever."

A Koch or a Pasteur is wanted to ferret out the cause and cure of this perplexing, peculiar and distressing disease.

Ligation of the First Portion of the Left Subclavian Artery for Aneurism.

Kammerer, in the Medical Record for December 23d, reports a case of aneurism in which he tied the left subclavian within the thorax.

The ligature was placed with exceeding difficulty even after resecting two inches of the sternal end of the first rib and the corresponding part of the manubrium.

Several pieces of strong chromicized catgut wound together were used and carefully tied so as to stop the current without breaking the inner coat. The patient did well for three weeks, but died at the end of the fourth week from hemorrhage at the site of the ligation.

The autopsy showed rupture of the artery where it was tied, the ligature having cut through the walls of the artery and lying within the lumen. There was not the slightest trace of clot on the proximal side

of the ligature. The aneurismal sac was lined on its inner surface with a layer of fibrin, varying from one-half to an inch in thickness.

The Thyroid Gland and the Menopause.

Burr, in the Boston Medical and Surgical Journal for December 21st, reports an interesting case which opens up the question whether an over-active thyroid is not in many cases responsible for the nervous phenomena of the climacteric.

In the case reported the exophthalmic goitre was, in the writer's opinion, the direct result of the long continued congestion of the thyroid consequent upon the menopause.

Two minims of the tincture of belladonna three times a day relieved the symptoms very much. In one week the face flush had gone, the eyes were no longer prominent, the tremor and twitching about the mouth had disappeared, the speech was slow, but not as thick as before, the tongue was protruded nearly in the middle line and the pulse was normal.

He suggests the dependence of some cases of hysteria on thyreoglobulin poisoning and in the case reported no hysterical symptoms persisted after the subsidence of the thyroidal swelling.

The Nerve Cells in Health and Disease.

Our knowledge of the anatomy of the nervous system has been considerably advanced in the past few years and Riley, in Modern Medicine for November, discusses some of the causes of this advancement.

Three causes stand out prominently above all others and these are the Weigert, the Golgi and the Nissl methods of staining nerve tissue.

By the Weigert method we are enabled to see into the finer anatomy of the nerve fiber and thus they may be distinguished from all other nerve tissue.

Golgi's method shows the nerve cell in its entirety and from it we have found out that the nerve cell and nerve fibre are only separate parts of the same nerve unit, that every nerve cell with its processes form a distinct and isolated anatomical unit.

By the Nissl method we may contemplate the internal structure of the nerve cell and so the cell may be separated into distinct parts.

The author then considers the origin and development of the nerve cell beginning with the ovum. A further paper will illustrate the practical advantage of these aids to study.

The Simulation of the Symptoms of Other Maladies by those of Chronic Renal Disease.

We have all been at a loss in the treatment of certain cases to know whether the remedies should be directed to the heart or the kidneys and have compromised by giving a shot-gun prescription for both.

Syers, in Treatment for December 14th, calls attention to some diseases apt to be simulated as regards their symptoms by Bright's Disease.

Diseases of the heart, the digestive organs and the nervous system may be so simulated.

First in regard to frequency and importance stand diseases of the heart, as so often patients suffer with palpitation, shortness of breath, uneasy and painful sensations in the precordial region when, in reality, they are suffering from disease of the kidney.

Disordered digestion, as shown by distension and pain after food, loss of appetite and irregularity of the bowels, is not infrequently found in kidney trouble.

An examination of the urine should be made in many cases where it is not done and for the purposes of a speedy examination the author thinks nothing better than cold nitric acid.

Pleuritis.

Adams, in the Occidental Medical Times, says the first thing in order is local bleeding by scarification and cups, followed by hot applications.

Calomel and soda are then given with an antipyretic if the temperature is over 100 deg. Anodyne and whiskey. Quinine if any history of malaria.

He does not think much of strapping.

In children he uses counter-irritation instead of cupping.

Effusions should be aspirated with a diffusible stimulant just before the operation. Ethyl chloride renders the puncture painless.

Injections of Carbolic Acid for Tetanus.

Nietert and Amyx, in the Medical Review for December 30th, report four cases of tetanus treated by the injection of carbolic acid with three deaths.

In the first case 21½ grains were injected in 84 hours, in the second 11 3-4 grains in 30 1-4, hours, in the third 8 grains in 16 hours and in the fourth, which recovered, 267 grains were injected in 8 days.

Forty cases are now reported as having been treated with carbolic acid, four cases died and 36 recovered.

The Bacteriology of Gonorrhea.

Pothier, in the New Orleans Medical and Surgical Journal for January, reviews the bacteriology of Gonorrhea.

The organism was discovered in gonorrheal pus by Neisser in 1879.

They are micrococci, usually joined in pairs or in groups of four and are biscuit shaped.

His method of staining is with Loeffler's solution for 12 to 20 seconds, wash and dry, then stain in a 12 per cent. solution of eosin in 50 per cent. alcohol.

The gonococci do not stain by Gram's method, and they are found within the pus cells. They develop best at a temperature of 36 C.

They are pathogenic to man alone, but the toxin produces some reaction in animals. As the result of experiments he concludes that the gonococcus is the specific cause of gonorrhea, that they produce a virulent toxin, and that the effect of this toxin on the tissues may produce changes in them allowing access of other septic organisms which may become more dangerous after the action of the toxin.

Syphilis and the Birth Rate.

Hutchinson, in his Archives of Surgery for October, tells us of a woman 65 years of age who contracted syphilis from her husband more than 30 years before and was under treatment for a year. Fourteen children were born after she contracted the disease and 8 were living and healthy.

The woman herself at the of age 65 was in excellent health and the only trace of her bygone syphilis was a bald tongue with some superficial sclerosis.

In this case both parents had suffered from the disease, both recovered and he did not consider their prolificacy anything exceptional.

The Mind in the Treatment of Disease.

Holton, in the California Medical Journal for January, says that we must clear away the chaff and rubbish of the numerous modes of treating diseases without medicines and secure the kernel.

The influence of the mind in disease is too plain and decided to be disregarded.

He reports a case which shows that we often suggest pain to our patient in directing a certain treatment in our absence.

He does not think that we should resort to tricks of deception, but in a more reliable and dignified way we must secure the aid and help of the nervous system in our attempts to cure disease.

Urethral Exploration.

Valentine, in the International Journal of Surgery for January, says that the improper entrance of a rigid explorer may injure the urethra gravely and may mislead the operator.

He advises against the ordinary method of placing the instrument parallel to the inguinal fold, as it causes torsion and complication.

The explorer should be held across the patient's right thigh in an imaginary line that prolongs Poupart's ligament.

We should remember that the fossa stands at an angle to the urethra and that the explorer's tip should be guided along the floor of the urethra and not its roof. The urethra must be drawn over the instrument as it is forced forward.

The tip must not be moved from the posterior orifice. If the instrument turns on its axis it has entered on a wrong course.

Force must never be employed.

When traversing the posterior urethra the instrument should be guided along the roof. In prostatic enlargement urethral exploration is not easy. In such cases make forcible pressure of the prepubic soft tissues downward with a guiding finger in the rectum.

Hemorrhage in Pregnancy.

Murphy, in Treatment for December 28th, considers the management of abortion or miscarriage, placenta previa and accidental hemorrhage.

His rules in *abortion* are: to interfere at once, if the hemorrhage is dangerous or alarming; if any part of the ovum, healthy or diseased, can be proven to have come away; if any considerable part of the ovum presents through the cervix, or if pain and hemorrhage is prolonged under treatment.

The treatment is summed up in two words—rest and opium.

If incomplete the finger or dull curette.

In *placenta previa* expedite the labor as much as possible consistent with the interest of the mother and child.

Bipolar version according to the method of Braxton Hicks he considers the safest course under full anesthesia.

In *accidental hemorrhage*, with uterine contraction, rupture the membranes and deliver secundem artem; if uterine contractions are absent, vaginal plugging, uterine binding and general stimulation until the cervix dilates, but if symptoms continue under this plan, then Porro's operation. In severe cases the child's life need probably never be considered.

The Treatment of Diphtheria.

Wood, in the Southern Practitioner for January, says that antitoxin properly administered has a specific effect, and that he would as soon treat malaria without quinine as diphtheria without antitoxin. He further states that serum therapy materially shortens the duration of the disease and reduces the mortality at least one-half, not only in pharyngeal and nasal cases, but likewise in laryngeal diphtheria.

The earlier it is administered the more pronounced are its results in shortening the attack, in reducing the death rate, and in lessening the liability to the serious effects of the toxins, viz., heart failure and paralytic sequelæ.

It is doubtful if it reduces the percentage of cases of paralysis unless it be given in the first two days of the attack.

One large initial dose is productive of better results than repeated smaller ones.

In a clinical diagnosis of diphtheria, we should make it a rule to administer the remedy at once and not to wait for a bacteriological report to confirm or correct our diagnosis. So much better are the results of early injection that we cannot afford to wait for 12 to 24 hours for a reply from the laboratory.

It is practically harmless.

It is of no value in pseudo-diphtheria or streptococcus sore throat.

Antitoxin administered to healthy individuals possesses the power of conferring upon them immunity against diphtherial infection, but this protection is limited in most cases to about one month.

Fractures.

Estes, in the January issue of the International Journal of Surgery, discusses the treatment of fractures of the leg.

Anesthesia should always be used, and in the majority of cases plasterparis is the proper dressing. For oblique fractures with lateral displacement he advises cutting down on the break and placing and holding the fragments in apposition by a nickel plated steel plate with ivory pegs and over all a plaster. This should remain on for three weeks. The next best treatment for these fractures is the old fashioned fracture box with movable sides.

Plaster dressings should be cut and examined after two weeks if all goes well, if there is persistent pain, within 48 hours.

The ambulant treatment may be used for transverse fractures or for oblique fractures which have decided shoulders, the patient being allowed about on his crutches as soon as the plaster is hard.

Oophorectomy.

The technique of the operation is discussed by Goelet in the International Journal of Surgery for January.

The tube should always be left if in good condition. The patient should be prepared as for any abdominal operation.

After the peritoneum is opened the patient is placed in Trendelenburg position.

The ovary is brought out by two fingers astride the broad ligament with their palmar surfaces towards the uterus. If the ovary is hard to find the fundus of the uterus may be grasped with a tenaculum and used as a basis of search.

Adhesions should be carefully broken up when found. The broad ligament is so held as to project the ovary like a teat from its surface when it is clipped off with curved scissors. Bleeding points are ligated with fine catgut and the surfaces covered over by bringing the margins together with a continuous suture of fine catgut, thus preventing adhesions. The avoidance of the mass ligature is a great advantage.

The incision is then closed by the continuous layer and subcuticular suture, the resultant scar being scarcely noticeable.

Simple after treatment is all that is necessary.

Glanders in Havana.

According to Acosta and Davalos, in the Medical Record for December 30th, the prophylaxis of glanders is not properly carried out in Havanna even under American control.

It was bad enough under the rule of Spain but even now it is not all that it should be.

The prophylactic measures now in force are one inspector, a hospital and a good set of municipal ordinances, but the power of the inspector does not go beyond a certain point, as he is only an employee of the sanitary department.

The authors claim that the prophylaxis as now carried out is a menace to public health and that it should be taken out of the hands of the sanitary department and placed under the control of the municipal corporation.

Glycosuria in Spinal Disease.

Several cases are reported by Lockhart, in the St. Louis Medical Era for December, in which he brings out the fact that glycosuria is not a disease *per se*, but simply a warning sign of danger somewhere else. He says when sugar is found in the urine we should always search for other symptoms of disease in the spinal cord.

Appendicitis in a Hernial Sac.

Tenney, in the Boston Medical and Surgical Journal for January 4th, tells us of a case of appendicitis in a hernial sac in an old lady 79 years old.

He operated under local anesthesia, using the stronger Schleich mixture, though the pain caused by the manipulation of the pedicle was so intense a few whiffs of ether were given.

A teaspoonful of pus and several hard masses were found in the appendix.

It was tied and cut off close to the ring to which it was tightly adherent.

There was slight infection for a few days, otherwise the recovery was uneventful.

Three inches of the appendix was removed.

The hard masses proved to be fecal.

The Diet in Typhoid Fever.

Manger, in the Medical Record for January 6th, reviews the literature on the more liberal feeding of typhoid patients.

Barr, of Leeds, fed his patients with bread and butter, minced meat and ordinary mixed diet even when the temperature was 104 with no bad effect.

Bushnyev, of Russia, believes in feeding as fully as possible, and in 80 cases his mortality rate was 10 per cent., while in 74 cases treated by his colleague and given milk 12.1 per cent. died.

Shattuck and Fitz, of Boston, are also heartily in favor of a fuller diet.

Two hundred and thirty-three were treated with the milk diet, the mortality rate being 10 per cent.

One hundred and forty-seven were allowed a liberal diet with a mortality rate of 8.1.

Shattuck's diet includes:

Milk, hot or cold, with or without salt, diluted with lime water, soda water, Apollinaris, or Vichy water; peptogenic and peptonized milk, cream and water (*i. e.*, less albumin); milk with white of egg, buttermilk, koumyss, matzoon, whey, milk with tea, coffee or cacao.

Soups—beef, veal, chicken, tomato, potato, oyster, mutton, pea, bean, squash; carefully strained and thickened with rice (powdered), arrowroot, flour, milk or cream, egg, barley.

Mellin's food, malted milk, carnepeptone, bovine, somatose.

Beef juice.

Gruels—strained corn meal, crackers, flour, barley water, toast water, albumen water with lemon juice.

Ice cream.

Eggs, soft boiled, raw, egg-nog.

Finally, minced lean meat, scraped beef; the soft part of raw oysters; soft crackers with milk or broth; soft puddings without raisins; soft toast without crust; blanc mange, wine jelly, apple sauce, and macaroni.

Manger does not advise that each and every patient be placed upon these less restricted diets, nor that every article of diet should be allowed, but those who have the advantages of hospital services should give an extended trial to the more liberal feeding of typhoid fever patients.

Amputation of the Fallopiian Tubes.

According to the Medical Dial for December Johnston in the Richmond Journal of Practice advocates removal of the tubes in extrauterine pregnancy, whether ruptured or unruptured, if the tube is much enlarged and altered.

In kinks and strictures, if these are numerous, decided, and accompanied by dense adhesions, because having established by operation the perviousness of the lumen under such conditions, it cannot by any means at our command be maintained, and may be followed by either hydro- or pyosalpinx.

In hydrosalpinx of either the follicular or flowing varieties, for the reason that the naked eye cannot define the limits of the former, and the latter will yield to no other treatment. In simple hydrosalpinx if the tube is greatly distended, its wall much thinned and in the presence of adhesions.

In pyosalpinx in every instance where the infection is other than gonorrheal, and in these if the abscess cavity is large and tube walls much impaired. Indeed, attempt to save a suppurating tube is rarely justifiable.

Salpingitis.

Shoop, in the Brooklyn Medical Journal¹ for January, says that more than 60 per cent. of the cases occur in women who have borne children, and about 21 per cent. in those who have had one or more miscarriages.

Gonorrhea he does not think as much at fault as was once supposed, and even in those cases who have gonorrhea, the streptococci are the real exciting agents.

Rest in bed; anodynes; iodine per vaginum; ichthyol and glycerine; hot water douches and attention to the endometritis.

In operative work he advises conservatism, except where there is a hydro-, pyo- or hematosalpinx.

The Tonsillar Ring.

This ring consists of at least seven distinct masses of lymphoid tissue arranged in an annular manner in the oro- and nasopharynx, says Vail in the Cincinnati Lancet-Clinic for January 6th.

These glands are important in the child, as they act as receiving stations for metabolism debris.

He states that all children have pharyngeal tonsils, but not all have adenoid vegetations, as the latter are pathological.

The lingual tonsil is often found hypertrophied in adults.

The symptoms of enlarged lingual tonsils are:

Sensation of a lump in the throat, which the patient is constantly endeavoring to swallow, but which seems to lie just outside of the reach of the muscles of deglutition.

Early voice fag noticed in public voice users.

The barking cough at puberty—"graveyard cough."

Constant desire to clear the voice by hemming and hawking, with nothing raised.

Relief of symptoms during meal time.

Spasmodic asthma.

Globus hystericus.

Patient fears there is a cancer or consumption of the throat.

Vague distress in the throat that the patient cannot locate or describe, and blood stained sputum.

Sudden Death in School.

According to the Medical Arena for December, a school girl, ten years old, died suddenly from the excitement attending a slight punishment by her teacher.

The teacher reprimanded her and seizing her by the arm ordered her out of the room.

A moment afterward the teacher heard a cry and on going to the girl's assistance found her in a faint. By the time the physician arrived the child was dead.

The history of the case showed plainly the existence of some heart lesion.

Quite a stir was caused in the neighborhood and the Board of Education was implored to banish corporeal punishment from the schools, which was refused.

The Arena rightly places the blame where it belongs, on the parents, as it is only those children who are not ruled at home that are so difficult to control at school. It is usually the disorderly, unruly and often vicious parents who are responsible for the necessity of corporeal punishment in school.

Of course the death of the little girl is to be deeply regretted, but one case in a mil-

lion is not sufficient basis to demand legislation for all the others.

There are many ways of ruling children, but some children are not susceptible to milder measures, and a real good thrashing will do more to extract the old Harry out of some boys than all the sweet talk and admonition in the world.

Pseudo-Diphtheria.

Stillman, in the Columbus Medical Journal for December 5th, reports a case of acute inflammation of a portion of the upper respiratory tract in which a false membrane formed, but the Klebs-Loeffler bacillus could not be found. The case was one of mixed streptococcic and staphylococcic infection, lasting for three weeks, and simulating diphtheria in every point except in the presence of the specific germs.

The membrane appeared first on the left tonsil, not easily removed, and the surface bled on taking it away. The following day a membrane appeared on the right tonsil, and the patient's power of resistance was so feeble that at the end of a week the membrane was still present and spreading.

A spray of bichloride, 1-2000, was used daily with frequent gargling with a moderately dark purple aqueous solution of permanganate of potash. Salicylate of soda and iron were given internally.

The patient was male, aged 22.

There was no albuminuria or paralysis.

Aseptic Catheterism.

As near an aseptic catheterism as we can come is outlined by Beck in the Medical News for January 6th.

First, the instruments by boiling and they can be boiled in any place where there is fire and water. Next the surgeon's hands by soap, brush and water, alcohol and bichloride.

Then the cleansing of the balanopreputial space, or the vulva, as the case may be.

As to the urethra, he recommends the injection of a 5 per cent. emulsion of iodoform in glycerine before the introduction of the instrument.

No matter how many germs are in and along the urethra don't carry in any new ones.

He concludes that the three most important virtues required in catheterism are, thorough cleanliness, extreme delicacy, and much patience.

Lay men should not be allowed to do this if avoidable, if not then they must carry out the principles laid down for the surgeon.

Hydratic Measures in Febrile Disorders of Infancy and Children.

Cold water is not an antipyretic but an antifebrile agent, says Baruch in Pediatrics for January 1st.

In typhoid fever he uses the tub bath at 90 deg. for ten minutes, with friction, bathing the head and face with water at 60 deg.

This is repeated every 3 hours, reducing the temperature of the water 3 to 5 deg. each time until 75 or 70 are reached, then continues at this temperature as long as the rectal temperature is 103 deg.

Sponging he does not think much good, though it is somewhat refreshing, as it has not the true stimulating effect upon the central nervous system.

Wet compresses should not be covered with oiled silk, for while it protects the clothing it converts the compress into a warm poultice.

In pneumonic fever he uses the full bath at 96 deg. with continuous friction, ice water being added until the bath water is reduced to 85 or 80—duration 5 to 8 minutes.

The chest compress at 60 deg. is also useful repeated every hour or two.

The Treatment of Gunshot Wounds of the Abdomen with some Statistics.

At the New Orleans meeting of the Southern Surgical and Gynecological Association, Grant reports the result in 253 operated cases gathered by circular letter.

The mortality rate is 52 per cent.

He concludes that no case was injuriously affected by the operation.

He reports 108 cases in which a lesion existed, operated on by expert surgeons, the mortality rate being 49 per cent.

He maintains that the indications for an immediate exploratory operation, by an experienced hand where the ball has been traced into the cavity, are as imperative as the call for operation in strangulated hernia.

Surgical Antisepsis.

Ellis, in the Medical Age for December 25th, gives some late ideas regarding this subject.

The use of rubber gloves is recommended. When the gloves are not used the following is recommended by Weir:

The hands and forearms are scrubbed in running hot water with a brush and green soap; the spaces under and around the nails are cleaned with a bit of soft wood; then about a tablespoonful of chlorinated lime with an equal amount of washing soda is placed in the palm of the hand, and enough

sterile water added to make a creamy mass. This is rubbed over the hands and forearms until granules are no longer felt, and is pushed under and around the nails by a piece of orange wood. The paste is then washed off with sterile water, and the sterilization is complete. This mixture removes fat, grease, and a part of the epiderm, and evolves nascent chlorine, which is an active germicide, and being a gas, enters into the tissues to a greater degree than can a liquid.

The Treatment of Fractures Without Apparatus Immobilization.

Lucas-Championniere, in the Medical News for January 6th, considers the principles of the treatment of fractures by systematic movements and massage without the employment of apparatus for immobilization.

The author has been studying this subject for some time, his first paper on this subject appearing in 1867.

Moderate movement favors the repair of fragments of a bone, at the same time it preserves the vitality of the limb and the suppleness of the articulations, the muscles and the tendons.

The massage should never give pain and it should always be followed by an attempt at passive movements of the joints of the limb and this should also be without pain.

He speaks from an experience with 1,200 cases, including fractures of the clavicle, humerus, radius, forearm, olecranon, scapula, femur, tibia, fibula and both malleoli.

In several cases the mixed method was used, that is an apparatus was applied and removed from time to time to allow movement and massage.

Diabetes and Its Constitutional Treatment.

Pettyjohn, in the Medical Herald for December, says that the treatment of diabetes should be essentially constitutional.

He places first, four to six weeks of the rest cure, a good doctor and nurse, proper food, faridization, massage, hydrotherapy and remedies to increase the digestion and assimilation of the carbo-hydrates.

He says the profession has been relying too much upon the miller and pharmacist.

There is no such thing as a diabetic diet, or diabetic flour.

He gives rye bread, rice bread, potato, milk, fish, meats (except pork), green corn and vegetables, fruits, nuts and cheese and eggs.

He allows the patient all the water he needs

The Treatment of Serous Effusions.

Lewis, in the Medical Record for December 30th, recommends a solution of methylene blue for injection into the cavity.

He first withdraws some of the serum, dissolves the methylene blue in it and returns the solution through the aspirating needle.

Thorough sterilization is necessary.

He reports 20 cases treated in this manner in which the average duration was 13.1 days.

The introduction of methylene blue into the pleural cavity even in the dilute solution, is inhibitory or fatal to the tubercle bacilli as well as to other germs and its antiseptic properties though weak are well established, forming as it does a perfect solution with the serum, no part of the membrane or effusion escapes its influence.

Separation of the Lower Epiphysis of the Femur.

Cottam, in the Railway Surgeon for December 26th, reports a case of traumatic compound separation of the lower epiphysis in a boy age seven.

About two inches of the diaphysis of the femur protruded through the skin overlying the popliteal space.

The Gigli saw was used in resecting about an inch of the diaphysis and the bones were drilled and wired together. Guaze packing with plaster dressing from hip to ankle with extension. On the 5th day the plaster was cut over the popliteal space and the wound dressed daily.

In 6 weeks the external wound had healed.

After 19 weeks the boy is able to walk and run without perceptible limp unaided by cane or crutches.

Veratrum Viride and Viburnum Prunifolium.

Throck, in Wisconsin Medical Recorder for December, gives some therapeutic suggestions in regard to these drugs.

The properties of veratrum are emetic, cathartic, diaphoretic, expectorant, nervine, antispasmodic, arterial sedative, resolvent, febrifuge and anodyne, and he says when a stimulant is needed then veratrum is indicated to stimulate the vital forces.

In fevers and inflammations of the severe type he considers its action most beneficial.

He uses it in delirium tremens, mania, whooping cough, asthma, hysteria, cramps, convulsions, epilepsy, functional and organic disease of the heart.

He also recommends it in diseases of the

kidney and bladder as an alternative, as a liniment in sprains, bruises, tumors, rheumatic enlargement and in eczema.

He considers it contraindicated in paralytic cases, hectic cases, hemorrhage or pregnancy.

The viburnum he classes as an antispasmodic, tonic, astringent, diuretic and alterative.

It may be used in aphtæ, ulcers and ophthalmic affection, locally; internally it is curative in chronic diarrhea and dysentery and has a good effect in palpitation of the heart.

It is useful in threatened abortion, nervous headaches, dysmenorrhea, menorrhagia, amenorrhea and ovaritis.

The Hygiene of Pregnancy and Parturition

Cleanliness is most important says Hurt in the Medical Review for December 23d.

If gestation is complicated with any form of disease it should be cured if possible, if not the system should be strengthened and fortified against its injurious effects.

Anemia cases should receive proper treatment and the quantity as well as the quality should be investigated. Hyperemia may, in some cases, be as inimical to health as anemia in others.

Regulation of the diet, exercise in the open air short of fatigue, and bathing are useful. He recommends an elastic bandage in the last three months of pregnancy and the first few days after confinement.

The value of venesection in some cases is brought out in the report of a case.

He says in concluding that the chief aim should be to keep out that which ought not to go in.

MISCELLANEOUS.

The Czar's Physicians.

A French journal states that there are no fewer than twenty-five medical men attached to the Russian court. There is first a physician-in-chief, and then come the physicians-in-ordinary and the honorary physicians. The surgeons-in-ordinary number three, and there are four honorary surgeons. Of ophthalmologists there are two, and other specialists abound in proportion. The Czarina has a physician, a surgeon, and three specialists. In addition to this goodly array there are a chiropodist-in-ordinary and an honorary chiropodist. The cynical may find here a satisfactory explanation of the alleged wretched health of this poor man.—*Medical Record*.

NEW YORK CITY,
December 29, 1899.

Editor *Charlotte Medical Journal*:

Dear Sir—On page 595 of the last number of your excellent journal is a formula for the preparation of an aqueous solution of the suprarenal capsule.

I regret exceedingly that the method of preserving the suprarenal solution with boric acid or camphor has been advocated; since the untoward consequences following the therapeutic use of suprarenal have been infection of the parts treated, in every case of this infection either camphor or boric acid had been used. While on the other hand the use of the aqueous extract of the dried gland freshly prepared has never caused infection in any of the two thousand cases treated by me. And I find upon careful inquiry that this has been the common experience.

Yours,

W. H. BATES.

The Fee of the Doctor.

The October number of the *Ladies Home Journal* contains a very interesting article upon this subject which we hope will be read with considerable profit by a large number of people. It contains, however, some good suggestions which might well be followed by the doctors if they are to lessen the amount of worry over uncollectable accounts, and increase the amount of their income.

The writer says: "I have often thought that if doctors sent their bills at shorter intervals than they now do, it might mean prompter payment. Except in cases of practiced illness, I have never quite understood why physicians, instead of waiting three, six and sometimes twelve months, should not adopt the commercial method of presenting monthly bills. It is unquestionably a trait in human nature which makes it harder to pay a bill six months after services have been performed, and when, in many cases, those services have slipped from the mind. However, the very fact that the doctor has already waited three or six months should entitle his bill to first or early consideration of payment. If some families kept their groceryman or butchers waiting for the payment of their bills as they do their doctors, their credit would be soon looked into and regarded with suspicion."

We would like to add to this that the doctor has to pay the tailor, the butcher and the groceryman like anyone else, and no extension of credit is granted. The doctor is not offended by receiving a monthly statement of account from people

from whom he buys the necessities of life, and on the contrary the general public should offer no objections if the doctor adopts business-like methods and also renders his statements monthly. In alleviating pain and suffering, if not in the saving of life, the doctor has certainly rendered services which rightfully cannot be estimated by a standard of dollars and cents, and which too often seem greatly disproportionate in value to the size of his fee. Except, as already stated, where the indebtedness is very large in consequence of practical illness, there is no good and sufficient reason why the doctor's bill should not receive the same consideration as those from tradesmen to whom money is paid for something less valuable than life and health. We have always advocated and will continue to advocate the presentation of monthly statements by all physicians to patients who are indebted. No physician who adopts this policy is the loser, but on the contrary gains in every instance.—*The Fort Wayne Medical Journal*.

Abnormal Self-Consciousness in Children.

When the child's appetite is good and his temperature normal, most physicians are apt to think him safe in his mother's care and no longer dependent upon medical advice. Yet, if we counsel correct habits of diet, exercise and sleep, we ought not to be considered as transgressing very far the legitimate bounds of medical practice if we essay occasionally a warning word about so bad a mental habit as self-consciousness. Such advice when given to a reasonable mother may be in the best sense prophylactic. Few parents can be gotten to believe, for example, that "forwardness," disobedience and rude conduct in a young child are sometimes a grave sign of mental deficiency. Gowers has noted them as one of the earliest indications of abnormal cerebral function. Instead of the youngster's being prompted to rudeness and impertinence and laughed at for his supposed precocity, such performances should be viewed with anxiety and should be gently but promptly suppressed. That small children should be "seen and not heard" is a maxim based on an enlightened psychology. The abnormal self-consciousness that prompts such outbreaks can easily develop into an egomania; the growing brain tissue is, as Horace so well said long ago, *ceruus in vitium flecti*. Even where it is not congenital, a morbid feeling of self can be awakened and nourished with alarming ease and speed. No child should be encouraged to repeat poetry before his mother's

guests, or praised for his "pretty curls," or even have his first trousers made too much of. The less he thinks of himself the better. He may be judiciously commended for good conduct or for diligence in study, but never flattered for his cleverness or good looks, or anything which he has not come by through self-forgetting endeavor. Both boys and girls should be taught to *endure*; to neglect trifling aches and pains, and seek for a remedy rather than cry over the trouble. Self-command and self-control are the noblest things a man can strive for, and he will never gain them unless he began learning in infancy to fix his thought and will upon objects outside himself. If such principles of education were more closely followed, hysteria and the "artistic temperament" might gradually disappear; and the hosts of insane people now walking at large, because their disorders of consciousness are not directly menacing to society, might be much diminished. Improper marriages are, of course, at the root of the evil. Bad training is, however, almost as frequent a cause, and is one which in the present state of society is much more readily remediable. To Macbeth's famous question, "Canst thou not minister to a mind diseased?" the modern physician should find a better and braver answer than that of the doctor in the play, "Therein the patient must minister unto himself."—*Pediatrics*.

The Right of the Dead to Live.

There appears to be a strong impression—perhaps only a space-filling revival of an impression—going the rounds of the newspapers at least, that many people are buried alive. The revival of this ghastly idea from time to time has led to various tests and devices by which the unfortunate result might be averted, but we have found none so original and startling as the following, said to be the invention of Count Mitchel de Karnice Karnicki, chamberlain of the Tzar of Russia. A demonstration of the apparatus has recently been given at the New York Academy of Medicine by M. Emile Camois, of Paris. We do not vouch for the exact authenticity of the following account, which, however, we have no doubt does, if any, only minor injustice to the truth:

"The apparatus used for the demonstration presented a gruesome spectacle. On the platform rested a coffin, with the front side left out to give a view of the interior. Four stanchions six feet high, corresponding to the depth of a grave, supported a scaffolding, upon which rested the apparatus proper. 'La Karnice,' as the Russian

invention is called, consists of an iron box about two feet square, from the under side of which a four-inch iron tube extends downward and fits into a hole in the coffin near its head. Through this tube extends a small iron rod, extending to within five inches of the chest of the body. The upper end of the bar connects with the mechanism in the box above. On the outside of this box is rigged a large gilt ball on a six foot lever, which, when the instrument is wound up, is held in a horizontal position by a sort of trigger. The grave is supposed now to have been filled in, leaving the box of machinery and the gilt ball inert on top. No one is supposed to be left in the vicinity except the cemetery keeper or grave digger. Supposing the body suddenly revives, it may either pull or push the ball at the end of the rod, with the same result. Instantly on top of the supposed grave the gilt ball flies up on its lever with a bang. The lid of the machinery box flies open, and a bell within with a capacity of a dozen alarm clocks begins to ring energetically, and fresh air is admitted. The interior of the box displays a lamp which it was explained could be left lighted at night. The automatic opening of the box releases a reflector which adjusts itself near the lamp. This reflector, it was explained, would throw the cheerful light of the lamp down through the four-inch tube into the coffin, so lighting up the interior that 'one could read a newspaper with ease.' The lecturer referred to this last feature several times as being particularly comforting. The interior of the machinery box further contains a small double-barreled arrangement whereby simultaneously with the agitation of the gilt ball, the ringing of the bell, and the lighting of the lamp, a small skyrocket is set off, and a lighted bomb thrown a short distance away, there to explode. By this time it was but fair to assume, the lecturer said, that the cemetery keeper if not the entire neighborhood would be apprised of the fact that something was wrong."

We quite agree with the last statement, but a renewal of life gained at such a sacrifice of the ordinary amenities supposed to go with burial will hardly commend itself to the more seriously minded portion of the community. The Count should simplify his machine.—*Boston Medical and Surgical Journal*.

A Diplomatic Doctor.

"I wonder what makes Dr. Fitz-Higgins so popular?" "Why, his patients always have all the newest diseases."

The American Cigarette.

Among the many lines of scientific inquiry that have been undertaken by the London Lancet, not the least important is its investigation into the subject of tobacco and its adulteration. Through its Analytical Sanitary Commission it has had this subject under consideration at successive intervals since the year 1853. Its report of that year was based on the analysis of a great number of samples of tobacco and cigars purchased from shops in London. The decision then reached was that there was no evidence to show that such adulteration as was discovered was of a kind to produce injury to health.

Since that date the cigarette has been introduced in every-day life, and in 1888 this same commission analyzed the chemical constituents found in the tobacco and the paper of cigarettes and reported that there was no trace of opium nor any unclassified alkaloid in the tobacco, not a trace of chlorid or arsenic in the paper, but that there was a faint trace of copper due to the metallic lettering on the paper wrapper. The exaggerated statements concerning the adulteration of cigarettes and the poisonous constituents of the paper continue unabated, and a more recent investigation of cigarettes purchased in New York and the same brands of cigarettes sold in London has been made by the same commission. The results of this last investigation are published in the issue of the Lancet of December 9th, as follows: "As a matter of fact, the results in both cases show no foundation whatever for the exaggerated statements that have been made. Foreign toxic substances were not found in a single instance; amongst those looked for both in the paper wrapper and in the tobacco were morphia, phosphorus, arsenic, mercury, copper, and other heavy metals. The only evidence of a metal being present was in the case of copper in the paper. The quantity present was so excessively minute as to put any question of its being injurious beyond consideration. To sum up, there is not a single feature in these numerous results upon which can be fairly based any allegation of the presence of a substance producing injury to health."

It seems from this that the injurious effects of cigarette smoking result from the excessive or premature use of them. The almost constant custom among cigarette smokers of drawing the smoke into the lungs may also be mentioned in this connection, although the commission says that it is doubtful whether any nicotine ever reaches the mouth of the smoker except that present in the moistened tobacco which

is in contact with the lips. The smoke products of tobacco do not contain any important quantity of nicotine. There are toxic bodies, however, in the smoke. These are related to that interesting series of organic bases known to chemists as pyridines, but about which not much is at present known.—*Medical News*.

The Death of Dr. E. R. Axtell.

Dr. E. R. Axtell, the well known editor of the Colorado Medical Journal, died at his home in Denver, December 14th. Two weeks previous to his death he made a post mortem on a patient who died from general infection. Eighteen hours later he had a severe chill and died after great suffering from general infection which involved nearly every organ in his body.

Death loves a shining mark.

Dr. Axtell was known and loved for his clean life, his gentlemanly and courteous manner and his devotion to duty and scientific medicine.

By the lives of such men is the standard of medicine kept well to the front and the honor of the profession kept pure and sacred.

The practice of medicine is honorable, not by inheritance, but by the character of those who so work and live, that their death is transformed into a hallowed influence to those who are left behind.

Death of Sir James Paget.

The death is reported of Sir James Paget, F.R.C., L.L.D., D.C.L., former President of the Royal College of Surgeons, England, in his eighty-sixth year. He was born in Yarmouth, England, January 11, 1814. He studied at Bartholomew's Hospital in London, and in 1836 became a member, and in 1843 a fellow, made successively assistant surgeon, surgeon and consulting surgeon at St. Bartholomew's, sargeant-surgeon to the Queen, surgeon to the Prince of Wales, vice-chancellor to the University of London, and president of the Royal College of Surgeons. He was made a baronet in 1871. In his earliest surgical studies he paid special attention to pathology, and for years his "Lectures on Surgical Pathology" was a text-book of importance.—*Boston Medical and Surgical Journal*.

Deduction.

Coroner: "Do you wish to prefer a charge against the druggist who made a mistake in the prescription?"

O'Houlihan: "No, sorr. He ain't to blame. Oi troid to rade th' thing mesilf, an' Oi c'udn't make out a wurr'd."

Diet in Typhoid Fevers.

Fréd C. Shurtleff, M. D., Los Angeles, Cal. says:

Much has been written both pro and con in reference to this or that article of diet in the management of typhoid fever. It is a settled fact that the food must be fluid, highly nutritious and easy of digestion, for the maintenance of nutrition is imperative in this wasting disease. Milk is probably the most extensively used and will form the main article of diet so long as fever lasts. I have used milk in nearly all its various forms in the care of my cases from frozen or boiled sweet milk to butter milk, from sweet milk, milk with lime water to that partially digested with pepsin or pancreatin when digestion was enfeebled. The tendency in milk diet is to overfeed by forcing too large quantities at one feeding and thereby cause a disgust for that diet upon which we have pinned our faith. If one insists upon an absolute milk diet, not infrequently you will find your patient has gone without it rather than take it. They fret under its administration, digestion is interfered with, curds swarming with bacteria of decomposition are found in the increased diarrhoeal discharges, plus the bacteria of typhoid fever already existing, hence the object which we wish to attain so far as it is possible, (that of rendering the gastro intestinal tract aseptic) is defeated from the outset by error in diet. I have often been puzzled as to what to substitute for milk in this class of cases until the stomach became more tolerant. I have tried various farinaceous substances and discarded them on account of the increase of flatulency they almost invariably produced.

For sometime past I have tided my patients over their critical period by tablespoonful doses of lipuid peptonoids every two hours, giving nothing else in the way of nourishment but the above remedy. I cannot speak too highly of this elegant preparation where digestion is below par, as a highly nutritious food that will not curdle upon the stomach, or leave a residue in the intestinal tract. It is a slightly stimulating food, consequently your cases as a rule will require less alcoholic stimulants, a great desideratum in some cases. I do frequently carry through my cases of typhoid successfully, where no other article of diet is given from the time I make the diagnosis until convalescence is firmly established and I call the attention of the profession to it for that class of cases in which milk cannot be taken.—*Southern California Practitioner*.

The Doctor's Ass.

Dr. Achilles Rose translates as follows a story told in a recent number of *Kairoi*:

In Egypt, physicians visiting their patients often ride on asses. Asses are very popular in Egypt. Some Asclepias dismounted at the door of a patient of his who was suffering from pharyngeal abscess. By accident he entered into conversation with a friend. The ass, finding the door open, entered the house and went into a room on the ground floor, where the sick man, in a state of fever, was lying. Taking the ass for the doctor, he held out his wrist. The ass took the patient's hand with his teeth. This frightened the sick man so much that he gave a piercing cry. The abscess burst and immediate relief followed. The doctor quickly entered and looked for a stick to drive the ass out of the room, but the patient said to him: "Do not strike the ass, for he has cured me in two seconds, while you have tyrannized over me for fifteen days."—*N. Y. Medical Journal*.

Longevity.

Mr. George Humphrey, after the study of the life history of a thousand persons, seventy-four of whom were centenarians, concludes that the essential factors conducive to longevity are an inherited durability, good digestive and nutritive powers, temperance as regards eating and drinking, an energetic temperament, and active habits. This is evidently good sound reasoning, and we are glad to note that the author has reached his conclusions from such a practical standpoint. Even those who do not possess such an invaluable heritage as durability, can by proper care respecting their manner of living, especially with reference to their diet, acquire a durability through the strengthening of their nutritive and digestive functions, which will, barring accidents, greatly increase their years of life and usefulness.—*Modern Medicine*.

Epidemic in Japan.

A terrible epidemic of dysentery is sweeping over Japan with fatal results. Official statistics show that out of 50,000 persons attacked up to September 14th, nearly 12,000 have died. Authorities estimated that by the end of October 100,000 cases would be recorded.

Dr. George F. Butler has resigned his position as editor of the Medical Standard and will shortly establish a medical journal of his own.—*Medical Age*.

William A. Hammond, M.D.

William A. Hammond, M.D., ex-Surgeon-General of the United States army, died at his residence, in Washington, at 9 A. M., Friday, January 5th, having been stricken with heart failure after the hurried ascent of a flight of stairs; death came almost immediately.

Dr. Hammond was born at Annapolis, Md., August 28, 1828. He was graduated at the Medical Department of the University of the City of New York, and entered the United States army in 1849 as an Assistant Surgeon, with the rank of First Lieutenant. In October, 1860, he resigned to accept the professorship of anatomy and physiology in the University of Maryland. At the beginning of the civil war he again entered the army, and was assigned to the organization of general hospitals in Hagerstown, Frederick and Baltimore. Afterward the Sanitary Commission urged his appointment as Surgeon-General of the army, and in April, 1862, he received this commission with the rank of Brigadier-General. He instituted radical changes in the organization of his department and managed his official business with great ability. With keen appreciation of the wonderful opportunities for instructive and unusual specimens of gun-shot injury he established the Army Medical Museum at Washington, and suggested the plan of the Medical and Surgical History of the Rebellion. Unfortunately his career was abruptly closed and his reputation clouded by a charge of irregularity in the award of contract, for medical supplies. He was tried by court-martial and dismissed from the army August, 1864. He then removed to New York, where he practiced his profession, making a specialty of diseases of the nervous system, and promptly established himself as a recognized authority. He was professor of diseases of the mind and nervous system successively in Bellevue Hospital Medical College and in the Medical Department of the University of the City of New York. Later he joined with others of his colleagues in founding the New York Post-Graduate Medical School.

In accordance with an act of Congress, which was passed in 1878, the President of the United States was authorized to review the proceedings of the court-martial. As a result of the President's investigation Dr. Hammond, in August, 1879, was exonerated and restored to his place on the rolls of the army as Surgeon-General and a Brigadier-General on the retired list.

Dr. Hammond was a voluminous writer upon subjects connected with his specialty and contributed frequently to current medi-

cal literature. He founded and edited the Maryland and Virginia Medical Journal, and was one of the organizers of the New York Medical Journal. He established and edited for a time the Quarterly Journal of Psychological Medicine and Medical Jurisprudence.

Dr. Hammond was a man of commanding presence, and possessed of extreme self-confidence and remarkable personal magnetism.

Two children survive him, Dr. Græme Monroe Hammond, of New York, and the Marchioness of Lanza, formerly Miss Clara Hammond.

His remains were interred at Arlington Cemetery with full military honors.—*Medical News*.

Dr. William Osler to Medical Students.

On the occasion of a professional visit to Columbus recently the distinguished teacher and author, Dr. William Osler, delivered a Clinical Lecture before the students of the Ohio Medical University. It is needless to say that the students and the physicians present greatly appreciated the opportunity of hearing this eminent teacher and clinician. His closing remarks were of such a character as to be of interest to the profession in general, as well as to students.

"Gentlemen, the most unhappy day of my life was when I sold my brains to the publishers. For a long time they had been after me to write a text-book, but I resisted. I never thought text-books so very much. I was tired of them and thought I was fitted for something better than writing a text-book, but finally I consented. I must have had neurasthenia or something else, and I beg your pardon for ever having consented to write a book. I have been sorry for students ever since, and trust when Osler goes out of vogue some one will have ready an easier text.

"I am very glad indeed to have met you all. I never meet a crowd of medical students but I think of Abernethy's remark, 'Good God! What will become of you all?' I know what will become of you. You will all do well. The medical profession is one in which every man can make a success, that is to say, he can be successful if he will work hard, study hard, and take an interest in his patients, not that they are patients but because of his duty to mankind, will succeed. Practice not only with your head but with your heart also.

"Avoid professional jealousies and bitterness. Gad, doctors are worse than parsons in engendering ill feeling among themselves. When you locate, look up all the respectable doctors and leave your card.

Tell them that you are going to locate and that you expect to deal squarely, and you will find they will treat you right. Shut up at once the patient who would tell you of the faults of a professional brother. They will go to another and say the same of you. If you go with the seamy side out, the same side will be turned toward you. Go with the woolly side out and all will be well and success crown your efforts."—*Columbus Medical Journal*.

Prompt Diagnosis of Smallpox.

Within the past year smallpox has occurred at nine different points in Maryland outside of Baltimore, and in no instance was a private practitioner or a local health officer betrayed into error of diagnosis. Consequently no outbreak has made headway under cover, nor done serious injury in any locality. Of those physicians who were confronted by the eight initial cases not one had ever before seen smallpox. It was not to be expected that the diagnosis would be made with confidence, but in admitting their doubts, and in protecting public health pending the resolution of those doubts, the Maryland practitioners showed courage and good sense in most creditable contrast with the behavior of some of their fellow-craftsmen in other States under similar circumstances. No medical man in this State has so far committed himself to a diagnosis of epidemic chicken-pox, the unpardonable blunder which has contributed more than any other agency to the recent epidemicity of smallpox in the United States. No outbreak of smallpox can reach serious proportions through this error if medical men who have no first-hand knowledge of the disease will bear in mind one fact which their experience should have taught them concerning chicken-pox.

Among adults, especially among adult negroes, most especially in a grown negro of a migratory class, the occurrence of chicken-pox is rare, very rare, almost incredible. This consideration alone will suffice for the exclusion of chicken-pox, and after that the diagnosis of smallpox will depend upon:

1st. Invasion symptoms lasting longer than twenty-four hours, and varying in character from mere malaise to the classical prodromal phenomena.

2d. An eruption, palpable before it shows local color, choosing preferably exposed surfaces, but likely to be found anywhere, on the palms and soles, in the mouth or on the conjunctiva.

3d. Fall of temperature, or even a sense

of perfectly restored comfort, when the eruption appears.

4th. Umbilication, whether observed in one or two or in many vesicles.

5th. Rise of temperature when the eruption "matures." This symptom is strongly diagnostic when present, but its absence is not negative evidence, since the "secondary fever" is not an effect of the variolous infection, but of subsequent invaders.

6th. The separation of crusts, leaving visible, depressed, persistent scars.—*Maryland Medical Journal*.

The National System of Mortality Registration.

The efforts of the Director of the Census to secure the adoption of a uniform certificate for the return of deaths, and to establish a national system of mortality registration, will, of course, receive the commendation of the profession. A circular letter from the Director states that nearly all of the registration officers with whom correspondence has been had, have courteously and promptly given the assurance desired. They promise generally to amend or change death certificates sufficiently to embrace all the census requirements, and to put the improved form in use for the calendar year 1900, which is the period selected for the collection of mortality returns.

It is evident that upon the medical fraternity of the United States, more than upon any other agency involved, depends the ultimate success of the project, as the prompt and correct return upon the new death certificates, of the facts required by Congress for the census, is the chief essential.

A complete mortality register, including age, season, and climatic influences, would be of great advantage to medical science.

Certainly the profession will give all the encouragement and assistance possible to this commendable undertaking.—*Columbus Medical Journal*.

The Rhyme of the Bramble Bush in Real Life.

A street car struck Giuseppe Marate, a sailor, in Philadelphia, Christmas day, knocked him down, and dislocated his shoulder. He was put into a wagon and hurried off toward the Pennsylvania Hospital. The wagon jumped over a rut in the pavement and the jar reset the shoulder. When he got to the hospital the surgeons found the shoulder all right, bandaged it, and sent him back to his vessel.—*Medical Record*.

The Pathology of Labor Pneumonia as a Basis for Treatment.

At a meeting of the New York Academy of Medicine, November 2, 1899, Andrew H. Smith, read a paper on this subject. In using the term "pneumonia" he said that he desired to restrict it to the form variously designated as lobar, fibrinous, or croupous, the form which, in typical cases, was ushered in abruptly by chill and fever, and which, after from four to nine days, if the patient was to recover, ended suddenly by crisis. Pneumonia, he says, was not an inflammation of the lung, although pneumonitis could be produced at will in anyone of a great many ways. Inflammation, suppuration, and even gangrene might be produced, but it would not be pneumonia. There was one thing which introduced into the parenchyma of the lung would always produce pneumonia, and that was the pneumococcus. These facts served to enable us to differentiate sharply between pulmonary inflammation and pneumonia. It was not enough to admit the infectious nature of the disease and define pneumonia as an inflammation excited by the presence of a specific parasite. The parasite was unquestionably there, but it did not excite an inflammation. In pneumonia the parenchyma of the lung did not suffer; at most there was a certain amount of disquamation of the epithelium. There was nothing left to represent the results of inflammation. The tremendously active process that had gone on in the lung had vanished, and had left no trace behind it. For this we had to thank the special nutrient circulation provided by nature. At the same time, and in the same area, one could see the action of the right heart completely suspended, and that the left heart going on actively. In the pneumonic lung, the capillaries which were the continuations of the pulmonary artery were completely thrombosed, and this thrombosis extended back to the heart. If the entire lung were involved the thrombosis would extend back into the bifurcation of the pulmonary artery. The blood supply from the bronchial arteries, on the other hand, was completely free from obstruction. In pneumonia we had to deal with a process of germ culture going on in a culture medium, each air cell acting as a tiny test tube, and filled with this culture medium. The complicated manifestations completing the clinical picture of pneumonia were epiphenomena. Two of these epiphenomena were of extreme importance, constituting singly, or together, the chief menace of life, viz.: (1). Infection of the system by toxin formed in the lung, and (2)

the embarrassment of the lungs from the exudation in the air cells. From the first arose a host of manifestations dependent upon toxæmia; from the second, we had the ever-present danger of failure of the right heart.

TREATMENT.—Heretofore the treatment of pneumonia had been far from satisfactory, pneumonia destroying more lives than any two other acute diseases put together. Within the past decade, however, there had seemed to be the drawing of a better era. The problem before us was first of all to arrest or inhibit the growth of the pneumococcus, bearing in mind the peculiarities of the organ in which the disease process took place. It should be remembered that the life of the organism was short, not exceeding ten or twelve days in artificial cultures. Another interesting fact was, that this was one of the most sensitive of all germs, its growth being arrested by very slight changes in its surroundings. If we could impregnate the blood sufficiently with a substance inimical to the growth of the pneumococcus, there would be a chance of forestalling the local process. The local process was always a spreading one, so that it seemed perfectly feasible to prevent the spread of it to other cells than those first invaded. Long before the microbic theory of pneumonia had been understood, or even thought of, calomel had been a favorite remedy, although given with the idea that it was an antiplastic. The older practitioners rarely had the hardihood to treat a case of pneumonia without a mercurial. In 1878 Dr. Mary Putnam Jacobi had reported the result of an investigation into the action of the so-called "sedative dose" of calomel in pneumonia. The results from this treatment, which had been a favorite one with the late Dr. Leaming, had been quite remarkably. Quinin, though a feeble antagonist to other than malarial germs, was known to have a decidedly beneficial action in pneumonia when given in rather large doses. This was not surprising when one considered how thoroughly this remedy pervaded the whole system. Dr. J. S. Thacher, at his suggestion, had made a number of experiments in the laboratory of the Presbyterian Hospital, regarding the effect of chloroform on the pneumococcus; and these had abundantly substantiated what had long been known from clinical observation concerning its powerful influence in pneumonia. Creosote had been highly lauded by a number of observers as a useful remedy in pneumonia. It had been given by the mouth and in enemata. The Carbonate of Creosote had been found

to saturate the blood readily without irritating the stomach, and without giving rise to poisonous or other untoward effects. A very remarkable series of seventy-two cases of pneumonia occurring in Austria among miners had been reported. All of these had been treated with large doses of sodium salicylate—gr. cxx. daily. All of these patients had recovered, and in not one had the disease terminated by crisis.

A POSSIBLE PROPHYLACTIC TREATMENT.—The treatment should be instituted, in all cases of pneumonia, at the earliest possible moment. The occurrence of the chill was a certain indication that a considerable amount of toxin had been already formed in the lung and had been taken into the general circulation. As the disease progressed, one after the other of the air cells would shut off, and in each one of these the germ culture must be allowed to go on. The young, newly formed cocci were the most virulent, as had been proved by laboratory cultures, and it was in the half-filled cells in which the blood was still flowing that these cocci were present in large numbers, and hence it was never too late to begin treatment. Dr. Smith said that, in his opinion, the family physician should instruct his patients to keep in stock some preparation of creosote or a salicylate, and to begin its use immediately upon the first sign of chill or pain in the chest. By this means he believed pneumonia might, in many instances, be prevented from developing. His experience with this comparatively new treatment had been rather limited, but so far it had been encouraging. At one time he had thought well of salicylates, but was now inclined to believe that in the later stages they were depressing, and certainly they were always irritating to the stomach. He now preferred Creasote Carbonate, also known as Creosotal.

ACCESSORY TREATMENT.—The accessory treatment: (1) Stimulation of the emunctories to carry off the poison; (2) sustaining the heart by the use of cardiac stimulants; (3) the use of vasodilators or venesection; (4) compensation for the loss of respiratory surface by inhalations of oxygen; (5) reduction of the temperature, as by the application of cold to the surface; and (6) relief of the incidental symptoms. When the chief danger to life was mechanical, from obstruction to the circulation, as shown by the labored respiration and the presence of cyanosis, he would give nitroglycerin, and not digitalis. If the patient's face could be kept florid, there might be hope, but blue lips were the shadow of death. He infinitely preferred the big pulse, however soft or gaseous, to a tiny

thread which the fingers could scarcely discover. Under these conditions he had never known the pulse to become full and slower from the administration of digitalis. Regarding the so-called digitalis treatment the speaker said that the infusion of digitalis used by Putresco did not represent the drug, containing chiefly digitalin and digitonin, and he would hazard the opinion that the good effects obtained from such administrations had been rather from the action on the heart than on the pneumococci.

Health Hints.

Don't work your ears; it may cause action in the brain cells.

Don't allow your necktie to mount above your collar; it creates insanity in people you meet.

Always wash your feet in water; molasses attracts flies.

Don't work in winter; it brings on pneumonia, and in the summer it debilitates by increasing the perspiration.

Always breathe through either your mouth or nose; deafness may result from breathing through your ears.

Eat fruit and vegetables in the summer; they are too expensive in the winter.

Cats carry diphtheria; don't contract diphtheria if you keep a cat.

Always disinfect your moustache before kissing your—wife. At the left hand side of the bar you will find coffee and cloves for this purpose.

Don't spit on the floor; with a little practice you can hit the rug.

Avoid all drafts; learn the step of the bank cashier and jump into a closet.

Never use face powder so it will show. Fool the people and you may marry rich.

Early to bed and early to rise does very well with preachers and guys, but makes a man miss all the fun till he dies and joins the old stiff that are up in the skies. Go to bed when you please, and lie at your ease, and you'll die just the same from a Latin disease.—*Gillard's Medical Journal*.

The usefulness of Good Hypophosphites in Pulmonary and Strumous affections is generally agreed upon by the Profession.

We commend to the notice of our readers the advertisement in this issue, "Robinson's Hypophosphites" also "Robinson's Hypophosphites with Wild Cherry Bark" (this is a new combination and will be found very valuable) are elegant and uniformly active preparations; the presence in them of Quinine, Strychnine, iron, etc., adding highly to their tonic value.

Mr. Shivers Tries Heroic Treatment.

"Um-m-m!" said Mr. Shivers, thoughtfully, laying down his paper. "I believe there is somet ing in that."

"In what?" asked Mrs. Shivers.

"Why, in their 'Health Hints for the Helpless' they say that the reaction and after-glow of cold morning baths is an infallible cure for neuralgia and rheumatism," explained Mr. Shivers.

"Cold water right out of the spigot, without any warm water at all?" cried Mrs. Shivers.

"Certainly," replied Mrs. Shivers.

"O-o-o-oh! I couldn't," shuddered Mrs. Shivers.

Mr. Shivers smiled a superior smile.

"Of course it is rather heroic treatment, and requires considerable moral as well as physical courage, but to a man convinced of its efficacy that is of no consequence," he said, complacently, "and I certainly shall give it a fair trial. Besides," he continued, fortifying his sudden resolution, "it is not one sudden freezing plung, but a gradual immersion while you very slowly count six. Like this: one, and you put in one foot; two, you put in the other; three, you sink upon one knee; four, you kneel on both; five, you plunge in your arms; and six, you immerse your body. So, after all, it is not so very dreadful. Yes I shall certainly try it to-morrow morning."

However, Mr. Shivers did not seem so enthusiastic in the morning. His wife let the cold water run, according to his instructions, until the tub was full to overflowing, but, in spite of reiterated information to that effect, he still lingered in bed.

"Jeremiah," cried Mrs. Shivers at last, from the bureau, where she was doing up her hair, "this is the eleventh time I've called you, and you just must get up. You'll be late for breakfast as it is. You needn't try that bath if you are afraid of it," she added with a laugh.

Slowly and reluctantly Mr. Shivers crept out from under the warm covers, silently casting a look of full reproach upon his smiling spouse, and into the bath-room, with the laggard step of one who has something weighing upon his mind. Then there was a long, a very long, wait. Nor was it until his wife had several times exhorted him to "Hurry up, Jeremiah!" that she heard him say:

"O-o-o-one. Ouch! Gosh!"

Then there was another wait, and another exhortation.

"T-t-t-t-twoooo. Ow-ow-ow-wow!"

Another wait and exhortation.

"Th-th-th-th-three-e-e-e-e," next came

chattering from the bath-room, immediately followed by a blood-curdling shout and a tremendous splash. Then there was a succession of agonized yells, and what Mrs. Shivers at first took for a streak of lightning flashed out of the bath-room, plunged into bed, and rolled itself up in the covers.

"Why, Jeremiah!" gasped Mrs. Shivers.

Mr. Shivers simply glared and shivered.

"Woman," he growled, when he could control his chattering teeth, "did you leave that cake of soap in the bottom of the bathtub on purpose?"—*Harper's Bazar*.

Mr. Dwight L. Moody, who died recently offered a gratifying contrast to many of his cloth, especially revivalists, in his appreciation of regular medicine and his antipathy to quacks. In speaking of a prominent Christian scientist, or faith healer, or what-not, in Chicago, whose offences against humanity and common sense are many and notorious, he praised medicine as the noblest of professions after that of the ministry. "Never yet," he said, "in all my years of work have I called upon an able doctor, telling him of the sickness and need of some poor friendless person, that he did not at once go to the rescue, without money and without price. Some of the noblest men I ever knew have gone out as medical missionaries, devoting their lives to doing good with the skill and healing medicines the Lord has conferred upon them." "These are the men," he continued, "who are called devils by the 'faith healers,'" but he prayed God to forgive those guilty of such slander. "God heals," he said, "through doctors and through medicines. Do not be carried away through ravings of fanaticism. We have a new 'ism' in America about every year—beware of the 'ism'! What would I do if I fell sick? Get the best doctor in Chicago, trust to him, and trust to the Lord to work through him. The doctors have done wonders as their knowledge has grown; they have reduced the dangers of death from diseases that once slew all they touched; and the doctors, if God helps them, will yet find a way to stop the ravages of other terrors."—*Medical Record*.

So far this season there have been reported eleven deaths and thirty other casualties incurred in the game of football. When it is considered that these battles only involve twenty-two in each engagement, the mortality is reaching the proportions of the bloodiest battles of the century.—*Medical Age*.

Some Results of Enthusiasm.

As a rule, if the proper enthusiasm be brought to bear, we attain our ends. A case in point, to which we wish briefly to refer, is the enthusiasm for pathological research which has of late grown up in this community.

Not many years ago, and certainly within the memory of the younger generation, an autopsy was a not too frequent luxury of medical students. It was generally supposed that any sufficient experience in this most important branch of medical training must be gained some how outside the regular medical course. It is true that at our larger hospitals post-mortem examinations were the exception rather than the rule, a fact due rather to lack of enthusiasm, as the event has shown, than to a deeply rooted prejudice on the part of friends and relatives. At any rate, a change came, and without any great upheaval it may be said that autopsies are now rather the rule than the exception.

This has come about largely through the active interest in the matter taken by the younger men, notably the house officers of the various institutions, stimulated by their elders. Prejudice has been found far less impregnable than supposed, and reasonable representations have usually met with as reasonable a response. At one period the number of autopsies done at the Massachusetts General Hospital was far above 75 per cent. of all patients dying in the institution, due to the strenuous efforts of its house officers.

When the Long Island institution started on its career as a hospital, it was urged that in that class of almhouse patients autopsies would be particularly difficult to obtain, owing to the active prejudices existing among the poorer classes of the community. The event has shown such a foreboding to be entirely unfounded. Between 50 and 60 post-mortem examinations have been made within a year, to the very decided benefit of medical teaching.

It must not, however, for a moment be supposed that this result has been obtained without effort. As an example of the enthusiasm which makes such results possible, we would mention the fact that very recently the assistant pathologist of the hospital, with several assistants, rowed to Long Island in the evening in an open boat, for the purpose of performing an autopsy, reaching Boston again at four o'clock in the morning. This requires devotion to one's work of a higher order, but with such sustained enthusiasm there cannot be the slightest doubt that this least esthetic and most important side of medicine will quick-

ly gain such a place that wise legislation, looking to the recognition of the right to perform autopsies in all cases, will, in time, be forthcoming.—*Boston Medical and Surgical Journal.*

The Medical Profession in South Africa.

We learn from the British Medical Journal that there are about 500 British medical practitioners in South Africa, and a much smaller number of Dutch physicians. The British are distributed as follows: Cape Colony, 268; Natal 60; Transvaal, 87; Orange Free State, 41; Rhodesia, 24; Zululand, 6; Swaziland, 3. There are 49 in Johannesburg, 38 in Cape Town, 20 in Durban, 13 in Grahamtown, 12 in Pretoria, 12 in Pietermaritzburg, 10 in Port Elizabeth, 9 in Kimberley, and smaller numbers in other towns in South Africa. Among those practising in that country is a Canadian, well known to many of us, Dr. Paul A. Gillespie, of Pretoria, who is President Paul Kruger's private medical adviser. Dr. Gillespie, a son of Dr. Gillespie, of Cannington, received his medical education in the Medical Faculty of the University of Toronto, graduating in 1891. After practising for a short time in Streetsville and Penetanguishene he went to the Transvaal, where he has been highly successful.

There is at present no medical school in South Africa, and the profession as a body has been much weakened by jealousies and internal dissensions that the prospects for the establishment of an efficient medical college have been rather poor. It is said that there has been a marked improvement during the last ten years, especially in Cape Town, East London, Port Elizabeth, Durban, and Pietermaritzburg, and it is hoped that the presence of Sir Wm. MacCormac in that country may bring about very important results. If Dr. Roddick's proposed bill becomes a law we are likely soon to have reciprocity with Great Britain which will practically mean that a Canadian physician may practise his profession in any part of the British Empire. South Africa is likely to become greatly developed after the war, and may furnish a field for a large number of physicians. If so, Canada, which has manufactured more doctors than she knows what to do with, can send a large contingent to that country.—*The Canadian Practitioner.*

Always empty the bladder before tapping the abdomen. Neglect of this precaution, especially in old men who may have retention due to prostatic trouble, may lead to puncture of the bladder.

Fractures of the Femoral Neck.

Although many treatments have been suggested as efficient in procuring union after fracture of the neck of the femur, hospital records and the wards of all large charitable institutions will abundantly prove that none of these methods are successful in certainly a very large number of cases. Senn advocated for intracapsular fracture the application of a plaster-of-Paris cast provided with a pad and screw, by means of which the bones, once having been brought into position by traction, could be so held until union took place. Though his paper on this subject, with reports of the cases successfully treated, appeared six or eight years ago, his method has, at the best, received a very limited trial, nor is there any evidence to show that it is generally successful. The same may be said of all the methods proposed. Hence, when Ruth reports in the *Journal of the American Medical Association* seventeen cases of unquestioned fracture of the femoral neck, occurring in persons ranging from twenty-five years to almost the extreme limits of age, treated by Maxwell, Kinnaman, Jenkins, Fagers, Coulter, and Ruth, and notes that in fifteen of these union was obtained with useful limbs, whilst the only failures to secure union were in two cases that absolutely refused to have the treatment carried out, his communications is entitled to consideration and respect.

After the injury he adjusted the fragments by fixing the thigh upon the abdomen and relaxing the psoas and the iliacus, bringing them above the fracture line, thereby preventing them from being permanently caught between the fragments. This position also relaxes nearly all of the external rotators. Then vertical traction is made of the shaft of the femur, which now stands at right angles to the trunk while a moderate eversion is being maintained. Next the leg is abducted to the normal line, and extension is made in the long axis of the trunk while an assistant makes traction one-half to two-thirds as strong upward, slightly outward and forward from the upper end of the femoral shaft. These manipulations should be made by firm, steady traction, not by jerks, which is to be made continuous by Buck's extension, with a weight of from ten to twenty pounds. Binder's boards should then be molded to the upper inner aspect of the thigh, over which a band of muslin four to six inches wide should pass outward and slightly upward and sufficiently forward that the weight from the pulley shall overcome the internal pull of all the rotators and abductors, and at the same time raise the lower

fragment to its normal level. The weight on this lateral pulley will be from five to fifteen pounds. The side of the bed corresponding to the injured side of the patient must be raised enough to prevent the individual from being drawn out of position by the lateral pulley.

In the report of cases it is specifically stated in at least three instances that the fracture was intracapsular; in eight others it was at the femoral neck, and therefore must have been intracapsular.

If in the hands of the general practitioner this modification of the customary treatment produces results in any way comparable to those reported, Ruth will have done a great service in lessening the heavy burdens of a crippled old age.—*The Therapeutic Gazette*.

Coroners' Duties—Physicians' Reputations.

The authentic account of a recent flagrant abuse of the authority of the Coroner of New York is briefly given in our report of the last meeting of the New York County Medical Society. Two physicians were asked by patients of theirs to see to a poor sufferer unable to pay for medical attendance. They did so at an interval of two weeks from one another, the second recommending her removal to Bellevue Hospital. The case terminated fatally at the hospital. A coroner's physician decided, on what cannot but seem extremely inadequate grounds, that death had resulted from criminal abortion. Both the medical attendants were arrested and imprisoned. Slight additional investigation showed the utter baselessness of the charge, and the physicians were cleared of all blame in the case.

Of course, by this time the harm had been done. For an act of charity physicians had been subjected to the indignity of arrest and imprisonment, to days of worry and injured feeling, and, though completely exonerated by the authorities, their professional reputations were seriously endangered by the unenviable notoriety given to the parties by the press. For it all there is, it seems, absolutely no legal redress. No one is responsible before the law for the mistake. This is, of course, an extremely serious state of affairs. Already there are many physicians who hesitate about the fulfilment of their duty in certain cases because of the liability to involvement in suspicious circumstances. If previous good standing in the profession will not serve to protect physicians from such groundless accusations, then every physician will hesitate to have anything to do with cases that above all others often need prompt and efficient attention.

The subject has been placed in the hands of the *comitia minora* of the New York County Medical Society for investigation and for a report as to the advisability of a legislative remedy for present abuses. We sincerely hope that it will receive the most thorough consideration and that some efficient relief may be suggested. In Massachusetts they have done away with the office of coroner altogether and do not appear to regret his going. Certainly here in New York his official actions may be so hedged about by safeguards that his powers cannot be used to injure honorable professional men. There is enough crime, flagrant, almost open crime, to occupy the attention of the office in just the lines of this case without the necessity for arrests on slight suspicions. The standing of a medical man in his profession must be the first consideration in such cases. If that is high, then circumstantial evidence, unless of the most conclusive character, must not be permitted to lead to official steps that shall peril his reputation.—*Medical News*.

Competition for the Senn Medal.

At the meeting of the Surgical Section of the American Medical Association, held June 4, 1894, Dr. Nicholas Senn offered to attend annually a gold medal of the value of \$100 for the purpose of stimulating surgical research. The offer was accepted. The committee for this year, consisting of Drs. W. L. Rodman, of Philadelphia, A. J. Ochsner, of Chicago, and H. Horace Grant, of Louisville, desire to direct attention to the following conditions governing the competition: 1. A gold medal of suitable design is to be conferred upon the member of the American Medical Association who shall present the best essay upon some surgical subject. 2. This medal will be known as the Nicholas Senn Prize Medal. 3. The award shall be made under the following conditions: All successful essays become the property of the Association. The medal shall be conferred and honorable mention made of the two other essays considered worthy of this distinction at a general meeting of the Association. The competition is to be confined to those who at the time of entering the competition, as well as at the time of conferring the medal shall be members of the American Medical Association. The competition for the medal will be closed three months before the next annual meeting of the American Medical Association, and no essays will be received after March 1, 1900. All communications should be addressed to Dr. W. L. Rodman, Chairman, 1626 Spruce street, Philadelphia.—*Medical News*.

Have Your Family Physician.

Just keep the heart a-beatin' warm,
Be kind to every feller;
Look for the rainbows in the storm,
But—carry yer umbreller!

Be brave to battle with the strife,
Be true when people doubt you,
Don't think that money's all in life,
But—carry some about you!

An' when it's time to shuffle off
An' you have done yer mission,
Just put your faith in Providence,
And call a good physician!

—*Atlanta Constitution*.

Mother Goose up to Date.

"Sing a song of penitence, a fellow full of
rye;
Four and twenty serpents dancing in the
eye;
When his eye was opened he shouted for
his life;
Wasn't he a pretty chump to go before his
wife?
His hat was in the parlor, underneath a
chair,
His boots were in the hallway, his coat
was on the stair;
His trousers in the kitchen, his collar on
the shelf
But he hasn't any notion where he was
himself;
When the morn was breaking someone
heard him call;
His head was in the ice-box, which was
the best of all."

—*Western Druggists' Exchange*

Plague at Manila.

Health officers have discovered within the walled city a native with pronounced symptoms of bubonic plague in a house in which two suspicious deaths have occurred. Active steps have been taken to prevent the spread of the disease. Secretary Root, after consultation with Surgeon-General Wyman, has decided to consign to the Marine Hospital Service the conduct of all quarantine matters relating to the army.—*Medical News*.

The Dios Chemical Co., of St. Louis, Mo., manufacturers of the Standard Remedies—Dioyiburnia (Uterine Tonic); Neurosine (Neurotic); Sennine (Antiseptic Dry Dressing); Palpebrine (External Eye Diseases) will mail to physicians free of charge their new combination Paper Weight and Mirror on receipt of 10 cts. to pay postage

No More Osteopathy in Kentucky.

The osteopaths in this State have put up a stubborn fight for the right to practice here. They have spared no means to secure their ends. Harry Nelson, an osteopath, entered a suit against the State Board of Health of Kentucky, in which he sought to enjoin the board from proceeding against him to prevent him from practicing medicine in Kentucky. He claimed to be a graduate of a reputable school, the Osteopathic Institution at Kirksville, Missouri. The State Board of Health denied the statement that the Kirksville was a reputable school of medicine, and were sustained in it by an elaborate opinion given in the Law and Equity Court of Jefferson County by its judge, the Honorable Sterling B. Toney. The judge held that there were only two points in the case to be decided—the constitutionality of the act to protect citizens from empiricism, and whether the Missouri college was a reputable institution, a question of fact.

The matter of its being a reputable medical college was thoroughly investigated by a committee appointed by the Kentucky State Board of Health, composed of Dr. J. M. Bodine, Dr. George W. Griffiths, and Dr. H. A. Cottell, of this city, who visited Kirksville and made a thorough personal investigation, and in their report to the board stated that the school was not reputable.

The school has been investigated by other members of the profession, who fully concur with the report of the committee mentioned above in its report. There can be no doubt that they have a good building and have spent much money in the hope of deceiving the public, but it will do them no good in this State. The law is plain, and the judge has so stated the fact in his decision.

Judge Toney declares in his decision that the action of the State Board of Health in all such cases as Nelson's is final and conclusive, and not a matter for a judge or jury to pass on.

The following is an abstract of Judge Toney's opinion:

As to the first question, Judge Toney held that the act was constitutional, quoting a number of State and Federal decisions in support of his position. As to the second, whether or not the Missouri institution was a reputable medical college, one of good standing, he ruled that this was a question of fact to be decided by the State Board of Health; that that board had instituted a careful investigation of this matter, appointing a special committee to do this, and that as a result of this investigation it had decid-

ed that the Missouri school was not a reputable medical college, although legally chartered under the laws of that State. The board's decision on this question of fact Judge Toney held was final and conclusive, and was not a matter for a judge or jury to pass on. The injunction was refused and petition dismissed.

Warfare and Wounds.

The modern small arms are again receiving a crucial test in the war that is being waged in South Africa. The occasional explosive effect of the small-calibre bullet driven with extraordinary rapidity has again caused unwarranted accusations on the parts of the belligerents that the other side was making use of explosive bullets. When the surgical history of the present war appears we will once more be impressed with the fact that wounds through important viscera are frequently attended with recovery, such it would have been hopeless to expect with the older and discarded weapons of former wars. In the meanwhile true antiseptic methods and the use of the X-ray for determining the presence of foreign bodies, and ascertaining the exact nature of the wounds of bones, will enable many an injured man to see his home again, who would formerly have been left behind, listed among those whose lives were lost. It is evident that the perfection of modern destructive methods does not in every way make war more terrible than it was wont to be, and those who believe that warfare is bound to disappear owing to the frightful execution of perfected arms, are yet very far from seeing their dream realized.—*International Journal of Surgery.*

"Le Mal Necessaire" is a title of a recent French novel, which depicts the life of a talented young Paris surgeon, who is impetuous and always in need of funds to keep up an unduly extravagant life. To supply the money, he operates right and left, regardless of everything except the purse of his patients. The chief interest in the story is said to center in the psychologic study of the assistant of the surgeon, who is an honorable man. The story is dished up with all the concomitants of modern French fiction. We wonder if the counterpart of this surgeon could be found in this country.—*Medical Review.*

In children a symmetrical pain about the shoulders should lead to a careful examination of the neck, for it is a frequent sign of beginning caries of the cervical vertebrae.

Medical Meetings and Medical Papers.

Some of us go to medical meetings; some of us write medical papers; a few of us do both, but a large proportion of us do neither. The reasons for these various attitudes of mind are no doubt very complex, and we have no desire to enter upon the task of analysis at this time. We should, however, like to call attention to a few palpable facts, which are constantly in danger of being ignored or forgotten. In the first place, papers which are admirable for publication are oftentimes most unsuitable to read at medical meetings. Medical meetings come usually in the evening; the audience is made up of men who have no doubt been busy during the day, and are hoping against hope that some slight recreation may attend their effort to be present at the meeting in question. They come possibly to learn something new, or to say something in discussion, but they do not come to be bored by detail or kept waiting for conclusions which might as easily be given at the end of fifteen minutes as at the end of an hour. Primarily, therefore, papers should be concise. If the attention of any considerable body of men is to be maintained, it is desirable that it be not taxed beyond half an hour. In this regard we have observed an improvement within the past few years; the tendency has grown at most of our societies to reduce the length of papers by special request to the writers, with a consequent gain in attendance. Infinitely worse than mere length, however, is redundancy of detail. In certain frames of mind in which, unfortunately, a doctor is very apt to be at the end of a day, details are almost unbearable. They rouse an inward revolt, which bids fair to put the sufferer into the category of the habitual non-attendants. This is due to the fact that minute details are almost never in place at medical meetings, and yet how often we hear them to the absolute confusion of our mental faculties. What idea can it convey to be told the minutiae of the daily treatment of a patient, temperature in fractions of degrees, pulse, respiration, urine, with its albumin and sugar and urea, and all the shades of change which mark the progress of disease? This is all extremely important as a matter of record, and as the basis of future publication, but as a means of profitable entertainment at a medical meeting it fails most lamentably. To begin with, no one can follow such details; they make no mental impression on the auditors, and even if they did the results are all the audience wants to know. Let the reader state, if he wishes, how assiduously he has studied his case, but let him also prove the

effects of his study by giving his matured conclusions on the occasion of his public appearance at the meeting. Such a habit should not be difficult of cultivation, and if universally practised, we have no question the medical meeting would quickly acquire an interest and influence which are now often conspicuously lacking. One other suggestion is the discussion. Why so many words? we frequently wonder. Why weary an already tired audience by an often irrelevant and frequently very long narration of personal experience, which might quite as easily be condensed into a few well-chosen sentences? From many sources a protest has gone up against this bane of the medical meetings. It is becoming more and more the custom to limit the discussion by each speaker to five minutes, with no detriment, we venture to think, to its effectiveness. We need good discussion, but let it be short and to the point. If we could shorten our papers, cut out extraneous detail, and insist on concise discussion, we should no longer be called upon to bewail the proverbially poor attendance at the social and professional gathering which we call a medical meeting.—*Boston Medical and Surgical Journal*.

A Black List of Non-Paying Patients.

The physicians of West Chester, a near suburb of Philadelphia, are reported to have formed a mutual agreement by which it is proposed to keep a general "black-list" of people who will not pay their doctor's bills. It would seem that West Chester suffers to a great degree from that very common pandemic, the leading symptom of which is disinclination on the part of the individual to remunerate his medical attendant, and that the doctors of this town hereafter agree to refuse medical services to all persons who by their past actions are classed among those able but unwilling to pay just accounts for physicians' attendance.—*Medical News*.

The following item is going the rounds of the medical press: Not long ago a surgeon in San Francisco was paid \$30,000 for performing a successful operation for appendicitis. Dr. Howard A. Kelly, of Baltimore, is said to have been paid \$21,000 for an operation and twenty-one day's attention upon a mine-owner's wife. Dr. Tiffany, of Baltimore, received \$10,000 for a single operation; Dr. Chambers, of the same city, \$5000 for operating for a stab wound; Dr. Parks, of Chicago, received \$10,500 for an operation; and Dr. Bernays, of St. Louis, \$5000 for a single operation.—*Medical Age*.

The Treatment of Pneumonia.

A partial analysis of the testimony, made as nearly as possible in accordance with the language of the writers, gives the following results:

The therapeutic use of cold in lobar pneumonia is—

Very valuable, according to seven observers: Baruch, Folsom, Fowler, Mays, Musser, Stucky, Wilson.

Valuable, according to nine observers: Atkinson, Bowditch, Cutler, Forcheimer, Johnston, Lange, Rochester, Stockton, Tyson.

Useful, according to four observers: Fitz, Hare, Janeway, Smith.

Unsatisfactory, and abandoned, one observer: Eichberg.

MODE OF EMPLOYMENT.

Ice bags, by thirteen observers. Those who do not recommend ice bags are Baruch, Bowditch, Fitz, Folsom, Fowler, Janeway, Johnston.

Cold wet compresses are approved by seven observers: Baruch, Cutler, Folsom, Fowler, Johnston, Musser, Stockton.

Cold sponging, five observers: Atkinson, Bowditch, Fitz, Musser, Stockton.

Cold plunge or tub, six observers: Atkinson, Folsom, Musser, Rochester, Stockton, Wilson.

The cold sheet is applied to the front of the body by Janeway.

INDICATIONS.

Hyperpyrexia is the only symptom relieved by cold, according to Janeway, Smith and Tyson.

Pain and delirium are also relieved, according to Atkinson, Baruch, Bowditch, Cutler, Fitch, Folsom, Forcheimer, Fowler, Johnston, Mays, Musser, Rochester, Stockton.

The heart and lungs obtain relief from mechanical embarrassment, in the opinions of Baruch, Cutler, Fowler, Hare, Lange, Mays, Musser.

The toxemia is lessened, according to Baruch and Musser.

CONTRAINDICATIONS.

As to contraindications, Musser says they are precisely such as are recognized in typhoid fever. Atkinson, Bowditch, Cutler, Folsom, Smith and Tyson admit practically the same contraindications. Forcheimer warns against the use of ice bags in children. Janeway says that furunculosis may follow the application of cold to the posterior chest. Lange considers marked toxemia a contraindication.

Broncho-pneumonia is mentioned by

Forcheimer, Hare, Lange, Rochester, as unlikely to be benefitted by cold. Mays employs ice bags in catarrhal pneumonia. The good effects of warm moist applications in this class of cases, especially in children, are spoken of by Forcheimer, Rochester and Smith.

PERIODS OF EMPLOYMENT.

On this point Stucky advises cold applications from the moment of diagnosis until "resolution is well established." Cutler says the indications for the use of cold "do not extend beyond a few days, perhaps only over a few hours." Baruch, Bowditch, Folsom, Fowler, Mays, Musser, Rochester and Tyson use cold through the period of pyrexia. Fowler mentions 104 deg. and over as the thermometric indication for cold applications. Tyson applies ice as often as the temperature goes above 100 deg.

Eichberg alone of the twenty clinicians has abandoned cold applications, having found them unsatisfactory. He uses hot baths in all but anemic or very prostrated patients.

The collected testimony seems to assign to hydrotherapy a very important place in the treatment of lobar pneumonia, and these short utterances, coming as they do from authoritative sources, form a substantial contribution to practical therapeutics.—*Maryland Medical Journal*.

Don't Worry.

"Don't Worry" movements and circles are being formed all over the world, with the following "Rules for Conquering the Worry Habit:"

1. Consider what must be involved in the truth that God is infinite, and that you are a part of His plan.
2. Memorize some of the Scripture promises, and recall them when the temptation to worry returns.
3. Cultivate a spirit of gratitude for daily mercies.
4. Realize worrying as an enemy which destroys your happiness.
5. Realize that it can be cured by persistent effort.
6. Attack it definitely as something to be overcome.
7. Realize that it has never done, and never can do, the least good. It wastes vitality and impairs the mental faculties.
8. Help and comfort your neighbor.
9. Forgive your enemies and conquer your aversions.
10. Induce others to join the "Don't Worry" movement.—*Medical Herald*.

Yellow Fever in Cuba.

The yellow fever statistics for 1899 from Havana show that yellow fever is still to be reckoned with in Cuba. The report for December shows: New cases 70, deaths 22, recovered 30, under treatment 25. Of the patients, 25 were Americans and 50 Spaniards. Six of the former died and 10 of the latter. Experts hold that the difference in the ratio of deaths was due to the use of alcohol. Comparison of the whole year with the ten preceding years is favorable, but the last three months of 1899 were unfavorable. The December record of deaths from 1890 to 1899 is 11, 17, 32, 10, 24, 19, 225, 17, 13, 22. The yearly totals for the same period are 327, 363, 362, 512, 418, 560, 1,540, 1,056, 162, 103. It is of interest that the records show that, in spite of favorable weather since September 1st, the situation has been worse than during the corresponding period of the Spanish occupation. The explanation offered is the great influx of Spanish immigrants who were not acclimated and who were huddled in the lower quarters of the city. They were badly nourished and were unable to resist the disease. One prominent fact is the failure of house disinfection to kill the germs of the disease. Every house in the city has been disinfected several times. Those familiar with the conditions are not surprised at these facts. The introduction of proper methods of sanitation will no doubt gradually overcome the disease.—*Boston Medical and Surgical Journal*.

The Georgia Physicians owe a vote of thanks to the noble Governor of our State who recently showed pure unadulterated backbone and intellectual equipment sufficient to expose by veto the fallacies of the Osteopathy Bill. This is one case where the man was greater than his party. The last Georgia Legislature would afford cartoons enough to last Puck and Judge a hundred years had the artist only been present. A more blooming set of flagrant idiots could scarcely be found. They passed every ridiculous bill that their ingenuity could devise, and passed absolutely nothing that would be valuable. The osteopaths of the West, especially their school in Kirksville, Mo., are sending runners all over the South to lobby with the various State Legislatures to aid them in legalizing a private enterprise. They found a lot of the most gullible suckers in the State Legislature that they could conceive of in their wildest fancy. But thanks it is that we have a man at the helm who has sense enough to keep our State from being the laughing stock of

the whole country. Governor Candler is the right man for Governor, and the physicians appreciate his recent effort for the Medical Profession. The following reasons for vetoing the bill, as given by Governor Candler, are unanswerable and show the clear head of our chief executive:

I withhold my approval from this bill because, aside from the objection that it advertises one particular school—the American School of Osteopathy of Kirksville, Mo.—there is no necessity for such an enactment. It provides among other things for the creation of another medical examining board in the State. There are already three of these boards and any graduate of any lawfully chartered medical college may go before either of them, present his diploma and be examined. If he passes an examination satisfactory to the board, a board the members of which are selected because of their eminence in the profession and their skill in medical science, he is authorized to practice medicine anywhere in this State, and apply any treatment he may deem best, including the methods of osteopathy. If he is not a graduate of a reputable medical college and cannot pass a satisfactory examination in the usual branches of medical education, he ought not to be licensed to engage in the practice of medicine.—*The Atlanta Journal-Record of Medicine*.

On the Treatment of Wounds.

A writer in the English journal describes a method of treating surface wounds by means of a light wire cage or supports which, while permitting the dressings to afford protection, prevents them from acting as foreign bodies. The merits he claims for his method are principally that the wound is very quickly, easily, and painlessly dressed, the patient no longer having to endure the agony accompanying the change of adherent dressings. Wounds, he maintains, treated by this method heal with a quickness as delightful to the surgeon as to the patient. The method is almost ideally aseptic, and the sufferer no longer feels a gradually increasing sensation of heat, pain, and discomfort as the discharges accumulate beneath the sopping dressings, nor does he behold the nauseating mass usually found when the dressings are removed. The writer believes that if the cage method of treatment be tried with wounds surgeons will come to the conclusion that surgical dressings applied to wounded surfaces are anachronisms, relics of barbarous times when pernicious dirt—that is, matter in wrong place—was applied to such surfaces.—*Medical Age*.

Why is the Negro Black?

In Pediatrics about a year ago a vehement discussion was raised by the publication in the editorial columns of that paper of the statement, made on the authority of a French physician, that negro babies when born were of a pinkish hue; in fact, differed little if at all in color from infants born of white parents. This expression of opinion was strongly rebutted by physicians in the South, who with unanimity declared that they had never seen a baby, born of black parents, white at birth. The *Lancet* in Great Britain took the matter up, as well as many medical journals on this side, and although their correspondents were all of one mind as to the negro progeny when born not being white, yet, curious to say, there was a considerable divergence of views with regard to the exact tint. The truth is, that all newly born negro infants are not of quite the same color, but vary to a certain extent. However, the assertion of the French physician that they are of a delicate pinkish hue was totally disproved.

Anthropologists and men of science have for long wrestled with the problem with respect to the cause of the color of the black man. Men of religion hold that it is owing to the curse of his father falling upon the descendants of Ham. Some think that the negro is a distinct race whose color has been the same since the world was first peopled, again others contend that the human people were all originally of the same color, and that the change has been effected by the influence of the climate of the countries in which they have lived.

The question is dealt with in an interesting manner by a writer in a journal named *The Family Doctor*, who says: "Though children in tropical climates may be born apparently white, or parents whom the solar heat has darkened in hue, and though we have not the means of ascertaining that white nations exposed in tropical climates for ages do become darker, still in conformity with the well-known law of the transmission of hereditary mental qualities, parents so blackened can communicate a slight, though imperceptible tinge to their offspring, who will thus enter upon existence with a larger share of black than their parents, and if equally exposed themselves will convey more to the next generation. Thus the black tribes of Africa may have become so through a long succession of ages, while the more recently peopled countries of tropical America exhibit the process in a comparatively early stage. It is needless to present, in opposition to this theory, that no change has been observable

since the discovery of America, for the ages required for the process must have been analogous to those required for geological phenomena, and are not to be squared with our usual ideas of time. All the variations in the external appearance of man, however, cannot be referred to the influence of the solar heat, though, before mentioning other causes, we may point out another clear instance of its action. In the cases of the aborigines of Hindostan, who are somewhat browned in complexion, the action of the climate is clearly observable, which is proved by the circumstance of the female inhabitants of the harem, derived from the same stock, being generally fair in hue. This is unquestionably in consequence of their secluded life, which prevents that exposure of person which their relations of the other sex necessarily undergo. And indeed, were color the only point to be considered, the doctrine of the action of climate might be held to be the best means of accounting for the wide varieties of the human species. * * * Whatever may be the immediate or remote causes of the dark complexion of the negro, philosophical inquiry has shown us that to him it is a provision of nature, mercy and benevolence. * * * The black color of natives of tropical regions may justly, then, be considered as a wise experience provided by Omnipotence for cooling the fever of the blood under the influence of the scorching sun."

The theory is at least as plausible as any other, but taking the fact into consideration that the problem as to why the negro is black is impossible of definite solution, a discussion of the subject is, although interesting, perhaps somewhat useless.—*Medical Record*.

The Emergency Call.

There is a widespread impression in the community that a medical man is morally if not legally bound to respond to any and every call for his professional services in cases that can with any show of reason be called emergency cases. We believe it to be quite true that no reputable physician would decline to render services for which he realized that there was pressing need, but the public is too ready to take upon itself the decision as to the urgency with which medical aid is required in any given case and to extend the "emergency" element to the whole course of the case. Consequently many a physician is blamed unjustly. We cannot see that he commits any fault if, after having done what the emergency really calls for, he declines to assume the further conduct of the case, provided

he has satisfactory reasons for doing so and states those reasons at the time. Moreover, he is breaking no moral obligation if his declining subsequent attendance is founded on his ascertaining that there is no reasonable prospect of his being paid for his services.

But we cannot go quite to the length that a witness did in an instance mentioned in the British Medical Journal for December 16th. The case was that of a woman who had broken the neck of her femur. The medical practitioner who was called says that he asked who was to pay for the attendance, and received "some indistinct assurance" that he would be paid, but he found that the injured woman was a pauper, so he recommended her removal to the workhouse hospital and telephoned the police, who conveyed her to the hospital, where she died of pneumonia after some days. He did, in our opinion, all that could reasonably have been expected of him. Nevertheless, his action was misrepresented on the coroner's inquest; it was stated that he said he must have security before he examined the woman. For the time being, it seems, this statement was accepted as true, and in the light of it the coroner remarked to a physician who had said on the stand that a doctor need not attend on a case unless he liked: "But you don't go the length of saying that you have a right to stipulate for security of payment before you perform any work, however urgent?" The reply was: "Certainly, you are quite justified to stipulate." It is to this answer that we take exception, and so does the British Medical Journal. "We think it was unfortunate," says that journal, "that Dr. M'Kean should have conveyed to the court the impression that the medical profession regards its members as justified in refusing assistance in emergencies unless they are guaranteed payment." "This is a view," it adds, "which it is impossible for the medical profession to indorse."—*N. Y. Medical Journal*.

Danger from Samples of Medicine.

The coroner of Philadelphia, after having investigated the death of a child from ingestion of sample pills, has called the attention of the director of public safety to the danger attending the indiscriminate and careless distribution of patent medicines and nostrums, particularly headache powders.—*Medical Record*.

Tommy:—Mamma, why have you got papa's hair in a locket?

His Mother:—To remind me that he once had some, Tommy.

Vapor Massage.

Vapor massage is rapidly increasing in favor with the medical profession as its great value in the treatment of affections of the nose, throat, middle ear, bronchial tubes and lungs is more widely known. Remarkably satisfactory results have been reported by many prominent observers.

Vapor massage consists in the application of nebulized vapor under pressure with more or less frequent interruptions producing a vibratory effect which acts favorably upon the circulation and other vital processes in the involved areas, just as manual massage acts upon the superficial tissues, besides applying suitable medicinal agents to the mucous membrane.

This very successful method of treatment was first introduced several years since through the invention of an instrument which is known as the Globe Multinebulizer, consisting of a series of nebulizers which communicate with a central storage chamber having a specially constructed valve at its outlet, by means of which the nebulizer vapor can be stored under pressure and delivered in a constant or intermittent current at any desired pressure.

Since the value of this method of treatment has been established beyond the question, numerous imitations of the original instrument have appeared. As usual, they are of questionable quality, and since success or failure depends very largely upon the reliability of the apparatus used, those who wish to employ this method in their practice, should be careful to select the original device (The Globe Multinebulizer,) which possesses many valuable features not found in any of its imitations.

Full information can be had by writing
THE GLOBE MANUFACTURING CO.,
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Help for Struggling Young Physicians.

A physician of St. Petersburg, Dr. G. I. Arkhangelsky, who died last summer, left nearly his entire fortune (about \$12,000) to the Society for the Protection of Public Health, in order to establish a fund for the assistance of young physicians in the first years of their practice.—*Medical Record*.

All's Well that Ends Well.

Aunt Geehaw (of Hay Corners): "Did the story you were just reading in the newspaper end happily, Joshua?"

Uncle Geehaw (approvingly): "Gosh! Yes; the beautiful heorine got cured of an incurable disease, an' it tells the name an' price of the pills that did the trick!"—*Puck*.

The Plague at Honolulu.

The transport "Centennial," arriving from Honolulu at San Francisco, December 28th, and the steamship "Aorangi," arriving at Victoria, B. C., the same date, reported the presence of the bubonic plague in the Hawaiian Islands. The outbreak occurred at Honolulu amongst the coolies recently arrived from Japan. Two to five cases terminated fatally. The Board of Health called for \$10,000 to fight the plague, and immediately \$25,000 was placed at its disposal. A system of fumigation was undertaking, the dead were cremated, and quarantine established. Later advices announce the death of a young girl from the plague, and the occurrence in opposite sections of the city of two cases of the disease in Chinamen. Honolulu is declared by the quarantine authorities an infected port. No ship leaving there can carry a clean bill of health. None of the army transports will be allowed to stop at Honolulu until quarantine is raised.—*Medical News*.

An example of the reckless manner in which physicians handle statistics is shown in a comparison of the death rate of the troops in the Philippine Islands, which is said to be seventeen or eighteen in a thousand during the year. A comparison is made with certain cities of the United States, in which the death rate averages nearly twenty in the thousand, the deduction being made that service in the Philippines does not impair the health much more than residence in one of our modern cities. The comparison, however, is not a very just one, as the "risks," to borrow a life insurance phrase, in the Philippines are all selected; that is, they are young men in the middle period of life, who have passed a rigid examination. A similar class of lives in any American city should not give a mortality of more than five or six in the thousand. As one writer suggests: "One might almost as well attempt to compare the death rate of a university or boys' school with that of a foundling asylum or old ladies' home."—*Medical Review*.

Testaments and Tobacco.

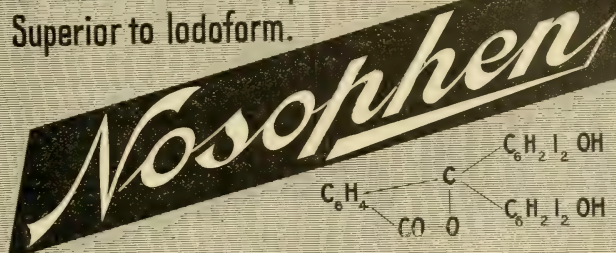
It is curious how rapidly the medical and scientific side of the campaign against tobacco in all its forms appears to be subsiding. This is amusingly illustrated by the fact that first upon the lists of comforts for the wounded supplied by the various funds in Great Britain come cigarettes and tobacco and pipes. Even the Red Cross Society has gone so far as to have special brands of cigarettes and makes of pipes

prepared and stamped with its sacred emblem. And not a single medical or even clerical voice is raised in protest. Even the clergy are becoming positively friendly to the weed and one cheery evangelical sent to the Red Cross Society a large consignment of *Testaments and tobacco*, in about equal parts.—*Medical News*.

The latest treatment of aneurism of the aorta is by the injection of gelatin. A successful result is reported by Kalindero (*Jour. of American Med. Association*, Nov. 25, 1899, page 1,353). In the observation described there were unmistakable evidences of a large aneurism of the aorta on a basis of malaria and syphilis with difficulty in respiration and cyanosis of the lips and extremities. Vigorous specific treatment failed to relieve the symptoms, and 100 c.c. of a solution of 1 gram of gelatin in 100 c.c. of salt solution, was injected subcutaneously in the buttocks. There was a slight chill and the temperature temporarily rose to 38.5, but in a few days the dyspnea had disappeared and the attacks of suffocation and coughing had become much less frequent and severe. The injections were repeated every week, producing each time the same slight, transient reaction. By the fifth injection the aneurysmal sac was obliterated and retraced, and all the fundamental troubles had vanished, and the patient considered himself entirely cured.—*American Journal of Surgery and Gynecology*.

One of the best operations for recent empyema consists in subperiosteally resecting a number of ribs by separate transverse incisions and then uniting these separate wounds by longitudinal incision and tying the intercostal arteries. Those ribs should be selected which removed will best drain the cavity, and the number limited by the size and extent of the empyema. All pockets and separate recesses of the empyema must be opened up into the general cavity. The whole wound is then loosely packed with gauze, and no stitches inserted, so that the whole wound will heal by a granulating process. The advantages of this open method of operating are: (1) All the different recesses, as well as the main cavity of the empyema, are made to granulate; (2) only the bony portion of the chest-wall is removed; (3) the lung and its surface are brought directly to the sight and touch of the operator; and (4) the removal of the hard structures allows of extreme flexibility of the chest-wall.—*American Journal of Surgery and Gynecology*.

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Use of Fats in Wasting Diseases.

By C. W. Lillie, M.D., Professor of Chemistry and Toxicology in the St. Louis College of Physicians and Surgeons,

The use of fats in diseases characterized by malnutrition and consequent wasting of the body has probably been practiced for centuries. Fats were doubtless employed without any rational idea as to their real mode of action. The fact that animals having well-rounded and plump bodies exhibited the greater proportion of the fats led to the conclusion that leanness was due to a want of fat—a very just and rational conclusion, since a lack of fat constitutes one of the chief symptoms of leanness. But the lack of fat deposited in the body may not necessarily be due to lack of fat in the food supply, but rather to an inability to store it up, either because it cannot be digested, or because being digested it is required to maintain the body heat.

The fact that the animal fats are the most powerful heat-producing substances employed as food is well known, but it may not be so generally known that they also serve to decrease the metabolism of proteids, and hence supplying to the body all the fats which it can use lessens the waste of other tissues and the destruction of other valuable tissue-forming food.

It is a recognized fact that in all wasting diseases the fats are first exhausted, being the most readily available of any combustible in the body, and when this is gone other tissues are rapidly used up to maintain the heat of the body.

For equal weights of fat and proteids the actual amount of heat produced in combustion is as nine of the former to five of the latter; fats and cane sugar as nine to four; so that taking the proteid bodies and the carbohydrates together it requires two pounds of these to equal one pound of fat in heat production. From this it can be seen why it is that patients with wasting diseases fail so rapidly after the fats are exhausted. *They are then living on their organized tissue.*

It is not to be inferred from the above that the actual loss in weight becomes more rapid after the fat is consumed, as such is not the case; but the amount of heat produced is less each day after the fat is consumed.

The actual loss of weight of adipose and muscular tissue during starvation are as about four of the latter to nine of the former, being nearly in the proportion of their heat-producing powers.

These various considerations, then, point to fats as an important and rational addition to the food; and, as the animal tissue fats are the highest in the heat-making powers, it is to these we must look in our search for something to counteract the losses during wasting diseases, and as a reconstructive during convalescence.

One of the prominent symptoms in these cases, after the fever has subsided, is a sub-normal temperature. It is in these cases that fats are most strongly indicated, but it is these very cases, too, where ordinary fats cannot be given because of the condition of the stomach and bowels. Fats cannot be assimilated. If supplied in the food they pass through the alimentary canal unchanged.

It is in this class of cases where we find the greatest benefit from the use of cod-liver oil; it is also these very cases where the pure oil cannot be taken. It is not unusual to hear these patients declare they detest fats. They cannot use butter. They cannot assimilate fats, and hence they instinctively reject them.

This instinctive rejection of fats in cases of wasting diseases of whatever kind, calls upon the physician for an exercise of his knowledge of the physiology of digestion. It is for him to supply a fat in a form which will not be rejected. If there is a lack of pancreatic secretion, as is apt to be the case, then it becomes his duty to supply the fat previously digested, or at least partially digested, so that the requirements of the body may be met without too great a tax upon the alimentary canal. This may be accomplished by a judicious combination of pancreatin with emulsion of cod-liver oil; there are some serious objections to the extemporaneous preparation of these emulsions. In the first place few pharmacists keep a pure, fresh, and palatable oil. Too much of the oil has the fishy odor so marked that it cannot be covered up by the adjuvants employed in the process of emulsification.

And second, the average pharmacist does not take the time to prepare the emulsion in a proper manner, and the result is that the oil separates and the preparation becomes unsightly and disgusting. These considerations oblige us to look for other forms of this oil, as there is no form of fat which contains the proper constituents for tissue building. And it is to this fact that we find so many varieties of cod-liver oil, and cod-liver oil emulsions.

To obtain the best results with cod-liver oil, the oil must be pure and absolutely free from the slightest trace of rancidity. Its preparation, too, should be such as will per-

mit of its quick and thorough assimilation. To accomplish this something more is necessary than the mere mulcilaginous suspension of the roughly subdivided oil, as in the ordinary emulsion. The oil globules require to be subdivided into infinitely minute particles and partly predigested. This can only be accomplished by means of pancreatin.

I have often ordered the following prescription, and find some cases in which it proves of benefit, but there are others who cannot take it:

R	Ol. morrhuae,	c.c.	240.00
	Liq. pancreati,		120.00
	Syr. hypophos. comp,		120.00
	M. et. ft. emulsio.		

Sig.—Take one tablespoonful three times a day.

Another form in which we have used this oil for about twenty years, and which has given entire satisfaction, is called hydroleine. It is prepared on a large scale and from the fresh livers, a fact that is greatly in its favor; first, because it is prepared before any decomposition has occurred in the livers to change their character; and second, because the immediate emulsion and incorporation with the other substances prevents any change taking place in the oil, so that we here find it as nearly as possible like the fresh oil. It is true that this is a so-called "proprietary," and we are not greatly in favor of this class of remedies, but there are compounds which are better and more uniform when made up by processes not possible to the retailer, and this product is a special example of this class, for the several reasons noted above.

It is true that some persons can take the "whole" oil, but it is generally found that when a person can take the oil it is not really needed, and that the cases really requiring it are the ones in which conservation of the digestive organs is especially demanded.

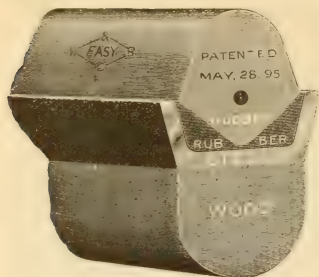
The benefits derived from the use of cod-liver oil have been so apparent, and its value over all other forms of fat so marked, that an effort has been made to separate the salts and organic principles from the crude oil and to employ these in more pleasant vehicles than the oil itself, but these attempts have not met with the success attending the use of the oil. The salts, alkaloids, and other organic constituents of the oil seem to act better when administered without removal from their natural environment. 827 Baugh Ave., East St. Louis.—*St. Louis Clinique*.

A \$10,000 Suit Settled for \$900.

In March last Dr. B. L. Robinson, of McLean, N. Y., brought a suit for \$10,000 for medical service against G. E. Chalmers, of Cortland. The latter is a reputed millionaire. The case was settled on December 15th. In September of 1898 Mr. Chalmers "began to commit suicide" by hacking at his throat with a razor. When he had seriously wounded himself he repented and called for a physician. Dr. Robinson responded, and performed some really difficult surgical work. His patient recovered. The doctor based his charge for \$10,000 on the ground that the life of the irresolute suicide was worth that amount. The attorneys for Mr. Chalmers declared that on this accounting the visits made by the doctor would average \$1,000 for each. The case was settled for \$900.—*Medical News*.

The practice of medicine is our new possession is a subject that will be of general interest to the medical men of the United States. Recently, Dr. John S. Brown has written of the practice of medicine in Puerto Rico, which he does not set forth in the most favorable light. San Juan, the chief city of Puerto Rico, has a population of thirty thousand; this is said to be amply supplied with Americans physicians, the estimate being about thirty-five, or one physician to every thousand inhabitants. Prevalent diseases are said to be tuberculosis, the various malarial infections, syphilis, and the eruptive fevers of childhood. Tuberculosis is said to prevail to an alarming extent. The medical club is much in evidence; and as there are no free hospitals or dispensaries, the care of the indigent poor is thrown upon the general practitioners. It is stated that about one-half of the patients treated since the hurricane and the sickness which followed belonged to the indigent class.—*Medical Review*.

The following testimony was recently given by a woman at the anniversary services of faith-cure believers, which was held at Mount Zion Sanctuary, in Chapel Avenue, Greenville, N. J.: "This man, when young, spilled some acid in his eyes and destroyed the sight of both. The physician removed his eyeballs and he was totally blind for many years. He was finally persuaded to pray for the restoration of his sight. Shortly afterward he felt something growing in the places where the eyeballs had been. New eyes were given to him, and to-day he can see as clearly as any person here."—*Medical Age*.



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Competition for the American Medical Association Medal.

At the meeting of the American Medical Association, held June 4, 1897, it was resolved to restore the former policy of the Association in favor of offering annually a gold medal for meritorious scientific work. The committee for this year, consisting of Drs. George M. Gould of Philadelphia, E. Fletcher Ingals of Chicago and T. W. Huntington of Sacramento, Cal., desires to direct attention to the following rules governing the competition:

1. The medal shall contain the seal of the United States or a seal of the Association, to be hereafter designed, on one side and an Esculapian staff on the other, together with the name of the recipient of the medal and suitable inscriptions.

2. The commercial value of the medal shall be \$100.

3. A standing committee on prize medals, consisting of three members of the Association, shall be elected by the Business Committee as follows: One for one year, one for two years and one for three years, and thereafter one to be elected yearly to hold office until in either case his successor has been duly elected. In no case shall a member of the Business Committee hold a place on the Prize Metals.

4. The competing essays shall be typewritten or printed and shall bear no mark revealing their authorship; but instead of name of the author, there shall appear on each essay a motto, and accompanying each essay shall be a sealed envelope containing the name of the author and bearing on its outer surface the motto of identification. No envelope is to be opened by the Committee until a decision has been reached as to the most deserving essay, and the other essays have been returned to their respective owners. The committee shall have authority to reject and return all essays in case none have been found worthy of the Association medal. Competing essays must be in the hands of the Committee not later than March 1, 1900. For further information address any member thereof.

The suggestion is offered, in a Paris exchange, that physicians in cities and small towns might obtain change of air and scene with the minimum of loss and expense, by merely exchanging their practices, offices, etc., for a short while.—*Medical Dial.*

He—I was cured by the faith cure.

She—What was the ailment?

He—Faith in the faith cure.

—*Brooklyn Life.*

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Horseless Vehicles for Physicians.

Automobiles for physicians are coming into quite extensive use in England and upon the Continent. Many of the English have adopted the term "autocar," which is certainly an improvement upon "automobile;" it is at least half English. This class of vehicles is commonly spoken of in England as cars, a name which leads to no confusion there, but which will lead to some uncertainty because of our almost universal use of the word in this country. In England street cars are called trams, while railroad cars are known as vans if they are for the transportation of goods, and as wagons if they are meant to convey passengers.

Dr. Charpentier of Uxbridge gives his experience with an autocar, which he has used for nearly a year. He compares the cost with a two-horse trap; and while the first outlay of capital is somewhat greater for the autocar, the difference in the keeping, as compared with horses, is of course, very much in favor of the latter. The item in repairs has been considerable in the autocar. The sum total of expense is about three times as great as for the horse-propelled vehicle. The car which he has used for the past year has been driven over five thousand miles, in all weathers and over all kinds of roads. The great advantages of the autocar over horses has been speed, readiness, and endurance. In favor of the autocar, he states it does not shy or bolt, or catch chills, and there is no anxiety about "saving the horses as much as possible."—*Medical Review*.

Henry George, like all of the really great of earth, was not "a dog of one trick." He was one of the most versatile of men and I am told was unusually well versed on medical and therapeutic subjects. Of a highly nervous temperament and organization, sensitive even to the slightest change of weather, he was particularly susceptible to headache and neuralgias. One day during a brief lull in the stress made upon him during his last sad mayoralty campaign, he complained to me of vertigo and severe pain in his head, saying: "I have satisfied myself as to the relative virtues of the various so-called analgesics—to my mind nothing equals Antikamnia—it relieves the pain and does not depress the heart." Poor soul he was too soon at rest—and the world lost one of the greatest geniuses of the age, for apoplexy only a few days after our little talk, put to rest his tired brain.—Bertrand Empre Laylander, in "Personal Recollections."

The Late Dr. Charles Inslee Pardee.

Dr. Pardee, the director of the Manhattan Eye and Ear Hospital, is dead.

He was assistant surgeon, then surgeon and then director to this well known institution. For some time he was also dean of the University Medical College and as such was remembered by many students.

He was an astute and skillful practitioner successful in his life and work.

The directors at their regular meeting in November passed the following resolution.

The board of directors of the Manhattan Eye and Ear Hospital record with profound regret the death of their late colleague, Dr. Charles Inslee Pardee. Dr. Pardee was appointed assistant surgeon at the Manhattan Eye and Ear Hospital in 1869, and promoted to the surgeons in 1879. He resigned the latter position on the 7th of November, 1885, and was thereupon elected a director of the hospital, which position he continued to occupy until the day of his death. He died on the 3d of November, and the board of directors make this record of his services to the institution, which were always of a high order. It is directed by the board that a copy of this be sent to the family of the late Dr Pardee and to the medical journals.

[Signed.] JOHN SINCLAIR, Pres't.

A. G. AGNEW, Sec'y.

The Weather in Medicine.

In the antique days of the cave-dwellers, when man and woman made their raiment of a single shag of fur, they felt the play of the elements hardly more than the surrounding wild beasts. The sun scorched and the frost nipped them, but little they recked if only the present hunger were satisfied. How different today are the relations of the human race to meteorologic environments. "Catching cold" is the common exciting or predisposing cause of most respiratory disorders. Many arthritic individuals excel the U. S. Weather Service in foretelling storms, by the pains in their joints. The most pandemic of epidemics seems to fly, as it were, on the wings of the wind. The variations in atmospheric electricity have a direct bearing on the morals and well-being of thousands of susceptible persons. When the sky is clear and the skin functionates, the spirits rise like a lark, to sink again into the depths when gathering clouds invite auto-intoxication. Altogether we are of the opinion that while the weather may be talked about too much by everybody, it is studied too little by the hygienists of the nation.—*Denver Medical Times*.

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Proper Food for School-Children.

"It has been my observation, after most careful experiments," says Mrs. Rorer, "that both children and adults who eat freely of good, ripe, mellow apples either raw or baked, and with the skin removed, are free from various forms of indigestion, liver trouble, and constipation; a scraped apple is more easily digested than one partly masticated. The skin of an apple is no more desirable than the outside bran of wheat. The ripe, mellow peach is really the only fruit for children. The banana, in its true home, where it becomes mature before picking, forms an important part of the diet of the inhabitants. Many varieties, however, used there in an uncooked condition, will not bear transportation; consequently, those which are sold in our markets are of an inferior variety, picked long before they are ripe or mature, and the ripening of which is almost a premature decay; they are exceedingly difficult of digestion, and children should never be allowed to eat the ordinary banana unless cooked. Baked bananas are very popular. Fried bananas, as well as all other fried foods, are to be condemned."—*The Dietetic and Hygienic Gazette*.

Diphtheria and Antitoxine.

The treatment of diphtheria by antitoxine is the most rational treatment we have of any disease to-day. It is not necessary for us to enter into a discussion of the preparation of the antitoxine for diphtheria and the investigations that led up to its discovery, in order that its value may be appreciated. Nearly everyone now is familiar with these facts. Antitoxine is the only thing that cures diphtheria, a few patients get well who have been treated without antitoxine, these we think would have recovered without any special kind of treatment, simply good care and nursing.

Many physicians wait for bacteriological diagnosis before administering antitoxine, in this we think valuable time is lost. Fresh serum properly used is practically devoid of danger, and should therefore be used just as promptly as it can be administered in all cases of false membrane in the throat and in membranous croup, if even slight fever be present. Delay is dangerous, antitoxic serum is safe in skilled hands.

It is a most unreasonable to think that serum can be a specific in those cases where lymphadenitis has taken place and where the toxin has thoroughly poisoned the economy, and where pathological change due to the violent product of the diphtheria bacillus has taken place and where it is used

as a dernier resort. Such practice as this brings diphtheritic antitoxine and appendicitis operations into dispute. We therefore reiterate that if good is going to be done, use antitoxine; use it early, and use it strong, and use it often if necessary. Begin even in apparently mild cases with one to two thousand units—if in six hours improvement is not apparent and we are fairly certain we have diphtheria to deal with, give more, and do not fear it. There may have been a few sudden deaths reported after the use of antitoxine, but how many more sudden and slow deaths there have been without it. Consider post diphtheritic paralysis and remember how many sudden deaths have occurred after the physician considers the case convalescing. Rarely do we hear of paralysis after antitoxine.

No physician should be allowed to practice medicine who will not administer antitoxine in diphtheria; he is worse than a Christian Scientist. State laws should make it a crime for any physician to refuse to use antitoxine, and punish that crime severely. Science has removed diphtheria from the pale of empiricism and those who refuse to see the light that is offered them are worse than blind.—*Ga. Journal of Medicine and Surgery*.

Professor Schenk Removed.

Dr. S. L. Schenk, professor of embryology and histology, and director of the Embryological Institute at the University of Vienna, has been retired on a pension. This action is in answer to a petition from the medical faculty of the university alleging the publication in the lay press of scientific theories constituting a form of advertisement. Dr. Schenk, it will be remembered, is the man who, not long ago, published a saccharine theory of sex production and made a little noise in the newspaper world. He had been director of the Embryological Institute for twenty-six years.—*Medical Record*.

The Irresponsibility of Prescribing Druggists.

Justice McLean, in the supreme court, recently dismissed the complaint in a suit brought by a butcher against a firm of druggists on Eighth Avenue, to recover \$10,000 damages, because one of the firm's clerks treated his injured finger and made it worse. Justice McLean held that druggists and drug clerks have no license to practice medicine and surgery, and that the complainant sought advice from the clerk in this case at his own risk.—*Medical Record*.

**IN SURGERY AND GYNECOLOGY,
IN DISEASES OF THE RESPIRATORY SYSTEM,
IN DISEASES OF THE DIGESTIVE SYSTEM,
IN DISEASES OF THE EYE AND EAR,
IN MALARIAL, TYPHOID AND ERUPTIVE FEVERS,
IN GENITO-URINARY AND CUTANEOUS DISEASES,**

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Literature on demand.

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Horse Meat Versus Hog Meat.

On account of the great advance in the cost of all varieties of meat food, prime cuts of beef for roast, steaks, etc., have become almost prohibitory for a large class of consumers in this community.

As is well known, our population consumes vast quantities of meats. The poor as well as the rich must have meat food at least once daily. The result has been that there is an enormous demand for cheap forms of meat preparations, such as sausages, Hamburg steaks, etc. Certain butchers in this city have taken advantage of this situation and have developed a new industry, viz. that of making sausages from horse meat. The profits in the sale of this article of diet is 4 to 500 per cent. greater than the market rate for other meats.

We are not opposed to horse flesh *per se* as an article of food under certain conditions. As to wholesomeness and palatableness, the flesh of a healthy horse is full as safe an article of diet as most of the meats which are retailed in our markets. There is, however, a general prejudice against the use of horse flesh as an article of food. The fact that ordinary tests, such as appearance and flavor, are not a sure indication of the quality of the meat for sale makes it easy for unscrupulous dealers to palm inferior grades of meat on the consumer.

Several butchers have in consequence been arrested. One Dutcher, who was convicted on his own evidence, claimed that these sausages were not for consumption in this city, but for distribution in the country. It has also developed that these unscrupulous parties were not particular as to the condition of the horses used for meat purposes. The greater portion came from worn-out horses which had been condemned to the bone-yard.

We can very readily understand why greed for gain would induce certain butchers to use horse meat in place of other meats, as they can purchase the former article for two cents per pound. The consumer, therefore, is paying as much for horse meat as for the legitimate article. This is not the worst side of the question, since it has been found that scrap meats from all portions of the animal are used for making sausages. The time may come when horse meat will be sold as a regular article of diet, but until cattle raising for beef purposes ceases to be one of the great industries of this country, we are inclined to believe that consumers will kick against horse meat.

We call the attention of the Boards of Health in the various cities and towns throughout the State to the fact that horse

meat sausages made in San Francisco are being shipped to points all through the State, as testified to by the manufacturers themselves. It will be in order for Boards of Health to take some of the sausages which are brought in from San Francisco and have them examined. Dealers who handle these sausages can be prosecuted as well as the manufacturer,—*Pacific Medical Journal*.

A New Method of General Anesthesia.

At a recent meeting of the Biological Society of France, M. Tuffier gave an experimental demonstration that an injection into the arachnoid is a practical and safe method of procuring surgical analgesia. With a patient who suffered severe pain in one of the extremities, and in whom no subcutaneous injection afforded relief, he administered fifteen grains of cocaine by intra-arachnoid injection. This gave complete relief for four hours. As a surgical analgesic he has been able to break up, without any pain, an ankylosis of the foot, to make a resection of the knee-joint, and to do vaginal hysterectomy. He is enabled by this means, while securing analgesia of the lower extremity, to preserve complete sensibility in the superior part of the body. Tactile sensibility is everywhere preserved. This matter is undoubtedly interesting, but it will require considerable demonstration to effect a belief that this method of procuring anesthesia can possibly be less dangerous than the employment of chloroform.—*Medical Age*.

A Case of Misplaced Confidence.

A physician describes a remarkable case of a patient's confidence in his medical adviser: "While I was a student in the medical college, I had a patient, an Irishman, with a broken leg. When the plaster bandage was removed, and a lighter one put in its place, I noticed that one of the pins went in with great difficulty; and I could not understand it. A week afterward, what was my astonishment to find that the pin had been run through the skin twice instead of through the cloth. 'Why, Pat,' said I, 'didn't you know that pin was sticking in you?' 'To be sure I did,' replied Pat. 'But I thought you knowed your business, so I hilt me tongue.'"—*Collier's Weekly*.

The whole estate left by the late Lawson Tait has been valued at \$47,850, and his personal estate at nil; all bequeathed absolutely to his wife. He was supposed to be worth much more.—*Medical Dial*.



6

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Fig. 1.

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Harmless Disinfectants.

Physicians should remember, and should so instruct the lay public, that there is no harmless disinfectant. All chemical substances, possessing the properties that are essential to the destruction of microscopic life, are capable of destroying the living cells of the human body.

Formalin is often referred to as a harmless germicide. It is only relatively so. Less caustic than the mercuric bichloride, and less dangerous than sulphurous acid gas, it is still capable of producing death.

Recently, at a farm connected with a state institution for feeble-minded youth, an employe was using a four-per-cent. solution of formalin for the purpose of destroying

fungi on seed potatoes. Leaving his work for a few moments—an adult feeble-minded person drank from one to three ounces of the solution. Spontaneous vomiting immediately followed. Albumin dissolved in water was freely administered, and further emesis produced by hypodermic injections of apomorphia. The vomited matter contained blood. For a time it seemed that the means instituted to save life would be successful, but at the end of twenty-four hours the patient died. The autopsy showed a part of the stomach highly inflamed, and a part bearing very much the appearance of old leather.

Formalin is largely used as a food preservative, especially in milk and butter. Its use is certainly deleterious.—*Chicago Clinic.*

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The Safest and Most Effective of Hypnotics.

By John Buxton Carr, M. D., Old Sparta,
North Carolina

The two essential properties in an hypnotic are, first, its safety, and second, its efficacy. Having had more experience with trional possibly than some of the profession a few facts in regard to its action may not be amiss. I can assert most positively that trional is safe, and am equally positive of its efficacy. It will produce sleep in a great many cases where morphia, chloral or the bromides fail completely. Occasionally we meet with a patient who has a weak nervous heart, so that we are afraid to give chloral; another in whom morphia is contraindicated for various reasons, and who is weak and almost prostrated for want of sleep. In these cases, if trional be employed you will find it to act more than happily. I have often been surprised in giving trional that the heart bears it so kindly; instead of depressing it, it seems to give it a better tone. I have never found trional to depress the heart. It seems remarkable, therefore, that in a recent article in Merck's Archives, Dr. H.C. Wood, of Philadelphia, should have attempted to cast discredit upon the safety of trional, by collecting nine cases from the literature in which poisonous symptoms are alleged to have followed its administration. This cannot but appear strange to an unbiased observer, in view of the fact that trional has now been used in thousands of cases with perfect safety. Moreover a careful investigation of these alleged cases of trional toxemia shows that in almost all the drug was employed in excessive doses, or during long periods, with total disregard of the well-known directions applicable to its use in protracted insomnia. Professor v. Mering, one of the foremost neurologists of Germany, several years ago undertook a collective investigation, both clinical and experimental, as to the effects of trional. In his article published in the *Therapeutische Monatshefte*, August 1886, he quotes the observations of Beyer, who says: "It may be called a brilliant result that, out of the many thousand patients in every locality

who have been treated by trional during the past five years, toxic effects, so-called, have been noted in only a bare half dozen, the aspect is still further improved if we subject these six cases to a closer examination." In commenting upon this statement Professor v. Mering says: "That Beyer's view of the subject of poisoning by trional is correct is supported by the fact that, while the use of trional has increased to a manifold extent, the number of unfavorable experience with this hypnotic has not risen." In another place in his article he says: "I have not been able to recognize any unpleasant sequelae from trional, although I have used it about a thousand times. In some cases it has been continued for three to four months in doses of 15 to 25 grains every two to three days without any injurious effect."

When it is remembered that the clinicians who contributed to this collective report include such distinguished neurologists and alienists as Professor von Kraft-Ebing, of Vienna, Professor Hitzig, of Halle, Professor Kahn, and Professor Van Noorden, it must be assumed that trional, if properly administered, is, practically speaking, a perfectly safe hypnotic.

In this country trional as an hypnotic has been constantly gaining ground. Among those who recommend its use, I would cite such well-known authors as Weir-Mitchell, B. Sachs, R. E. Edes, H. P. Loomis, W. B. Pritchard, R. Bellamy, D. Inglis, and R. Ferguson.

In a recent article in Merck's Archives, H. P. Coile, Professor of Clinical Medicine, Tennessee Medical College, states, that in his extensive experience with trional he has never seen any unpleasant or dangerous symptoms attending its use, and believes that in reasonable doses it is free from danger. The safety of trional is moreover shown by its extensive use in the sleeplessness of children, in which it has proved a perfectly innocuous hypnotic.

As regards the appearance of hematuria after the administration of trional, it would appear from the experiments of Bakoen on animals that this condition cannot be produced experimentally, even under the use of enormous doses. (see Drews, *Die Heilkunde*, 1898). Von Mering's experiments which were undertaken

on a large number of animals also showed that hematuria cannot be produced intentionally, nor even under conditions in which the nutrition is depressed. This author moreover believes that with the exercise of a little caution hematuria can be surely avoided.

My experience with trional has comprised most of the forms of insomnia in which its use has been found indicated. From the large number of cases I have observed in my private practice, and connection with asylum, as reported by its superintendent, Dr. Geo. L. Kirby, I have selected only two for the sake of illustrating the efficacy of trional in a class of cases which are not readily amenable to the influence of hypnotics.

C. B. J., aged 36, had been drinking heavily for several weeks, and was in the habit of letting himself down as easily as possible with morphine. His nervous system was thoroughly racked, and the morphia failed to have the desired effect. He had slept only about three hours in seventy-two. One dose of 20 grains of trional produced refreshing sleep, and after repeating the dose for three nights his nervousness completely disappeared.

J. T. D., aged 46, was suffering from the effects of a debauch, nausea, extreme weakness, marked nervousness and insomnia. Chloral seemed to increase the nervousness; under morphia administered hypodermically he remained wakeful with eyes wide open. I ordered trional in 20 grain doses, to be repeated in one hour if not asleep. The dose was repeated at the end of the hour, the patient dropping into a quiet sleep, which lasted about four hours. On the following night 25 grains of the drug were administered, and the patient fell asleep in twenty minutes, obtaining seven or eight hours of refreshing sleep during the night.

I know that trional is used with much success in the Keely Institutes throughout the country in those obstinate and tedious cases of morphia withdrawal. I mention this fact, not that I approve of Mr. Keely or his methods, but to show that he is not slow to appreciate the virtue in this drug as an hypnotic. I think that I can safely assert that if trional will produce a quiet and refreshing sleep in a habitue, whose portion of morphia is being withdrawn, it will act most satisfactorily and beautifully in a large majority of all other cases where an hypnotic is indicated.

I am convinced that in the above class of cases an hypnotic is subjected to a most searching trial, and for that reason I have referred them. I have used trional in

fevers, malarial and typhoid, and in numerous other cases wherever an hypnotic was required and have always found it to act most satisfactory. It is administered either in tablets, capsules or powders. I prefer the dissolve the dose of powder in a cupful of milk, thereby assisting the flow of blood from the brain to the stomach. The by- and after-effects of trional so far as my observations go, are nil. I have frequently administered as much as 30 grains at a dose without any bad effect, though as a rule, 20 grains is amply sufficient.

I believe, as is claimed for trional, that it possesses a large number of advantages over other hypnotics, in that it exerts no deleterious effects upon the intellectual, respiratory, or circulatory functions, and is free from injurious effects upon the kidneys or digestive organs. Taking it all in all, I believe that trional should head the list of our hypnotics, for it is among the few that can be administered for a week at a time, and cause no habituation; and as I have said before, it is safe as well as effectual.

Cholelithiasis, with Clinical Reports.

By J. W. P. Smithwick, M. D., LaGrange, N. C.

This is a condition attended by the formation of calculi within the gall-bladder. These calculi may be small and numerous which may be passed with no inconvenience; or they may be large and few in number and give very marked symptoms in their passage down the common bile duct. The greater portion of the individual stone is made up of cholestrin, principally, arranged in concentric layers. Salts of lime and magnesia, bile salts, fatty acids, and traces of iron and copper are also found in them. Their mode of formation is by no means thoroughly understood, but it is known that when bile is retained in the gall-bladder its concentration favors the deposition of cholestrin.

It is a well known fact that about three-fourths of the cases of gall stones occur in women. Sedentary occupations and over-indulgence in eating are important etiological factors. The subjects are often stout, and fond of saccharine and starchy materials; in short, the conditions which induce the formation of uric acid favor the development of gall-stones.

When a stone forms in the gall-bladder and begins its passage to the duodenum, if large, it excites violent symptoms known as biliary colic. The attack comes on without premonition and is accompanied with agonizing pain in the region of the

liver, which radiates to the shoulder. Often there is a chill with a rise of temperature. There are vomiting, great depression of the circulation, and profuse sweating. In a certain number of cases jaundice develops, though this is not a necessary symptom and only appears when the stone is passing down the common duct. An attack may last only a few hours, or it may be prolonged for several days or even weeks. The attacks may be repeated at short intervals, and finally when the stone passes an end is put to all the symptoms at once until the next attack. If the stone becomes impacted along its course surgical intervention must be resorted to or a fatal result will ensue.

To rationally treat this condition one must get at the cause; that is, correct the morbid process in the economy of the body which favor the concentration and inspissation of the bile. All intestinal, especially duodenal, indigestion should be corrected. The habits of the patients should be studied and regulated. The regulation of the diet should receive attention, and the starchy and saccharine elements of the food restricted.

During the attack there is nothing that can be done but give sufficient morphia to control the pain, and apply hot fomentations over the region of the liver. A few whiffs of chloroform may be necessary before the morphia has time to take effect. The bowels should be thoroughly moved by Calomel and soda.

It is after the attack that treatment can do the greatest amount of good by preventing the recurrence. Acting upon the advice of theories many physicians have been lead to use the different salts of sodium, especially the sulphate and phosphate, in doses of one or two drachms daily. This has failed to give the desired relief in the majority of cases in my hands. In the course of experimental study I was lead to try the citrate of lithia in conjunction with the phosphate of sodium, for its laxative effect, from the relationship of this trouble to that of the uric acids diathesis, and have noted some very happy results. At the present time I use the laxative salt of lithia—thialion—which precludes the necessity of giving the sodium salt.

To illustrate the value of and the results obtained by the above method I herewith detail the histories of a few cases.

Case III. F. E., aged 63 years. I found this man suffering all the agonies of pain that could be induced by an attack of biliary colic. I used the hypodermic syringe and gave him a few whiffs of chloroform as

quickly as possible. In thirty minutes I repeated the hypodermic injection, and in fifteen minutes more he was perfectly easy. I left some calomel and soda for administration. Returning the next day I found him doing well, having passed a stone early that morning. At that time I elicited the following history: That he had been troubled with these attacks for the last twenty years, but of late they had increased in frequency and severity, so much so that his life was a burden to him. He had tried everything that had been recommended for such troubles and failed to get any relief whatever. I put him upon the laxative salt of lithia in teaspoonful doses in half a glass of hot water after meals and at bed time. This treatment was kept up for four weeks, and then the dose was taken only at bed time. Since he began the treatment he has enjoyed complete health, has had no symptoms whatever of the return of the colic, and says he feels better than he has for several years past.

Case XIII. Mrs. A. N., aged 28, applied for treatment. She had been raised in all the luxuries of life, rather stout physique, and had had three attacks of biliary colic. At that time there was some tenderness over the region of the gall-bladder, though it was not enlarged. Stated that she was a large eater and especially fond of sweets. Was greatly troubled with constipation. I prescribed the laxative salt of lithia in teaspoonful doses in half glass of hot water after meals, and asked her to report at the end of a week. She did so, and informed me that she had been doing well. All the soreness had disappeared, bowels had become regulated, and said that she felt better generally than she had in a long while before. I advised her to keep up the treatment for one week longer and then reduce the number of doses a day to one, which was to be taken at bed time. At present she is doing nicely, not having felt any of the symptoms of her former troubles since she began the treatment.

These patients are very grateful to me for the benefit I gave them through this treatment, and they have shown their gratitude by sending me a number of good people who were troubled likewise. In the treatment of all of them I have had equally as good results as detailed above.

If you feel uncertain about a violent colicky pain, which simulates peritonitis, remember that in the latter disease it is quite impossible to move the abdominal walls over the intestinal mass, for the whole cavity is in a condition similar to that which exists in badly inflamed joint.

The Associated Diarrhea of Pulmonary Tuberculosis.*

By Dr. Louis F. High, 560 Main Street,
Danville, Va.

The frequency with which diarrhea occurs in the course of pulmonary tuberculosis is its own best reason for a more careful study of the causes of its production and the means for its relief.

The greatly diminished desire for food, a concomitant of advanced tuberculosis, resulting in the taking of quantities much less than the needs of the system require, followed by deficient assimilation due in part to the rapidity with which the alimentary substance is passed through the intestine, tends to rapid starvation.

The promptness with which a large number of cases of diarrhea yields to the plan of treatment presently to be considered, carries an impression contrary to that generally held, that the essential cause in a large majority of cases is not a tubercular lesion along the intestinal tract.

Digestive deficiency is the chief cause of the diarrhea. The intimate relation of the nervous supply of the lungs and the stomach is well known. The gastric derangement induced by nervous influence when the lung is diseased is as constant as the cough induced by the irritation of indigestion.

Whatever may be the first change that occurs in the cellular components of the digestive organ, its result is functional impairment. The disturbance probably results from the transference of sympathetic vasomotor influence followed by a disordered state of the circulation in the ultimate gastric capillaries.

The unbalanced nervous mechanism responds abnormally to stimuli and according to the extent and nature of the impairment of the special nerve cells, will be the character of the gastric secretion. The physiological ratio of the digestive enzymes are altered and the inevitable result is faulty chymefaction.

The altered digestive fluid is further hindered by the increased quantity of mucus produced as the result of the passively congested stomach lining. The mucus, unlike the gastric juice, requires no stimulation for its secretion other than passive congestion; therefore, its production continues to some extent, even when the stomach is empty. The result is that the lining is not only thickly coated with mucus, but often

contains, in dependant portions, a quantity of free mucus,

Upon the introduction of food into a stomach thus incapacitated, it is easy to understand that the bolus, already more or less coated by the buccal secretions and mucus of the esophagus, reaches its destination where the conditions opposing the contact of the aliment and the gastric juices are immensely increased.

The digestive fluids are secreted normally in response to the stimulating presence of food in contact with the nerve endings in the lining membrane.

The intervention of the layer of mucus on the walls of the stomach in a large measure prevents the stimulation of contact, therefore the secretion is delayed.

The movements of the stomach are not so dependent on the contact of food as its presence, so the aliment is rolled in the dependant portion of the stomach while but slightly, if at all, touched by the digestive fluid.

Here the character of the food plays an important part in the ultimate outcome of these activities. If the alimentary substance is of such a nature that the cohesiveness of its particles are increased by the water contained in the mucus, the result will be as I have seen, round lumps rolled so hard as to resist all digestive agents.

The digestion, hindered first by gastric juice of irregular constitution, and, secondly, by its inability to become intimately mixed with the food, delays its passage into the intestine. The unusual length of time it has been retained in the stomach and the deficient antiseptic properties of the abnormal gastric juice, have allowed and favored fermentation. When the food in this abnormal state enters the intestine, the enzymes of enteric digestion are inadequate to the task of rendering assimilable the illy prepared chyme.

The large quantities of the acids of fermentation, and the attendant chemical changes cannot be overcome and so the process continues.

Intestinal irritation is provoked, resulting in diarrhea, an effort of nature to eliminate what has become a foreign substance.

The treatment resolves itself into the fulfilling of two requirements. Remove the mucus from the stomach first; give remedies that arrest or retard fermentation secondly.

I have met the first indication most successfully by washing out the stomach before the morning meal. If the patient should miss a meal, then lavage should be done before the next. The kind of solution is not so important as a thorough cleansing.

*This Paper was Read at a Regular Meeting of the Danville Academy of Medicine, October 17, 1899.

Regardless of the quantity of the cleansing fluid necessary, all the mucus should be removed.

A dash of table-salt and sodium bicarbonate have a solvent effect on mucus. I sometimes use them, otherwise plain warm water is used.

In some cases the appetite that in a few minutes follows the washing is astonishing, and the digestion is correspondingly improved.

In most cases of advanced consumption, there is a great tendency to excessive mucus secretion. So constant is its presence that it may be regarded as a part of the clinical history of the disease.

Its formation is not confined to the stomach but in the mouth, trachea, esophagus and probably in the intestines as well.

When the morning lavage fails to control the bowels, it is usually due to this tendency to excessive mucus secretion, and that enough collects in the stomach after breakfast, between the other meal periods, with the altered composition of the gastric juice, to keep up the fermentation.

Supplementary to hyper-mucus secretion should be mentioned the digestive enfeeblement induced by fever. During the active period of tubercular disintegration, when there is absorption, the diarrhea is sometimes very formidable and unyielding.

The treatment consists of absolute and enforced rest in bed, cool or tepid sponging, aseptic diet and remedies that allay and prevent fermentation in the stomach and bowels.

For the latter purpose there are a number of remedies that are very satisfactory. Among the remedies of the antiferment class the sulpho-carbolates are entitled to first place. The calcium salt, of them all, seems superior. It has appeared to do all that an antiseptic can be expected to do in the bowels with little or no disturbance, and can be used for several weeks without the slightest ill results.

Next in order of general effectiveness is guaiacol carbonate. Its tendency to derange digestion when given for any considerable time has proven a barrier to its more general use. I supplement its action by giving it with charcoal, which causes it to be better borne by the stomach for longer periods.

Opiates and astringents have small place in the treatment of this disorder, which is easily understood when we remember that it is the contents and not the bowels that are at fault.

A man 52 years of age has never had teeth, and all 4 of his children are toothless.

Some Fallacies.

By F. R. Millard, M.D., San Diego, Cal.

Probably the one that holds the greatest number of captives, as it includes both laymen and doctors, is that cracked ice is good to allay the thirst caused by fever. Every country school boy knows that by eating ice or snow he can create a thirst that can not be wholly allayed until after he has eaten one or two meals, or has had a night's sleep. And every doctor knows that the arctic traveler who attempts to quench his thirst in that way generally pays for his folly with his life. Perhaps it does not often cause the death of the patient, though it does sometimes prolong the fever. But as both patient and physician are satisfied and grateful, it is not likely that the custom of prescribing it will soon cease. The patient is grateful, because his craving for it is satisfied, and the doctor is grateful for the increased length of his bill, and satisfied if it is promptly paid. Any doctor who owns or can borrow a clinical thermometer, *can if he wants* to know that the hot old-fashioned weak herb teas will allay the fever thirst and reduce temperature more rapidly than ice or icewater internally can do it.

Another fallacy is, that elegant pharmacy is an unmixed good. So far is this from true that it is a question whether it has not done more harm than good. *Pari Passu* with this increase in elegance has been an increase in the rate of drug consumption and no man of common sense will call this a good. To come from general to particulars, take belladonna. Elegant pharmacy demands that atropin take the place of the extract, and the U. S. Dispensatory, usually reliable, says: "Atropin can be used internally for all purposes for which belladonna is given." This fallacy has caused the death of many hundreds of children. A good extract of belladonna is just as sure a remedy for whooping cough as quinine is for ague. No one expects quinine to cure ague unless it is properly given. Yet it will sometimes cure when improperly given. Atropin will sometimes cure whooping cough, but the failures are so many that but few doctors who have tried it continue to use it, and those few make it a sort of sideshow and not their main reliance. But no doctor who once thoroughly learned how to use the extract ever relinquished it for any other drug. From the standpoint of the oculist, atropin is almost infinitely superior to the extract, and so it is to the general doctor as an emergency remedy. But for whooping

cough, for nocturnal incontinence of urine in children, and to relax adhesions and soften inflammatory exudates within the female pelvis, the extract is just as greatly superior.

Cascara sagrada is another drug whose usefulness has been much restricted by the craze for elegance, though increased safety has been the main cause alleged. But the danger attending the use of the undried bark should count but little more than does the danger attending the use of strychnine or opium. Still there is this difference: With these drugs there are both objective and subjective signs and symptoms to be observed before the danger line is reached. But with the undried bark there is no objective signs to be observed until the danger line is passed. But the doctor has educated the laity to demand drugs that the children cry for, and he must take the consequences, which are that his patients are dismissed only half cured, and months or years after come back as chronic lung, kidney, or neurasthenic cases to certainly plague his brain and possibly line his pocket.

There is another fallacy which is, that the whole of the abstracted active principles of a drug must have the same action as the drug from which they were abstracted. This cannot be decided by experiments on animals, nor on healthy men, but by observations at the bedside of those who are diseased. Such observations show that this is not true as to some drugs, and probably it is not true as to any drug. Cinchona illustrates this, and if there was a correct appreciation of its active principles and their uses several other fallacies would have no existence. By common consent the crystallized cinchona alkaloids or their derivations are always the best remedies with which to treat a first attack of ague. But after repeated attacks they lose their efficiency, and if a lasting cure is got it must be by other means. After such failure the extract of cinchona will often work a cure. When this fails the powdered bark will often succeed, though it is not believed to contain any principle not in the extract. Besides the total alkaloids required to cure the patient is greater when the extract is used than it is when the powdered bark is used. Unfortunately the patient's stomach sometimes refuses to entertain an amount of bark sufficient to work a cure, and then (if you have waited this long) you can prescribe chinoidin, which contains the alkaloids quinine and cinchonine in the uncrystallizable form, and if (as is likely) you get a cure it will be more lasting than when gotten by the aid of any other derivative of cinchonine. The statement in the U. S.

Dispensatory, that it is more apt to disturb the stomach than the crystallized alkaloids are may be true, but I cannot now recall a single instance in which any great trouble was had in getting the stomach to retain it. According to the best estimate I can make, it requires a little larger amount of total alkaloids to cure when chinoidine is used than it does when the powdered bark is given. I have treated many patients who were always made delirious and had intense headache from a single dose of five grains of quinine sulphate, but who took the equivalent amount of chinoidine, repeated every four hours and no discomfort. True it can cause cinchonism. But it is also true that it can cure more patients and not cause it, than any other of the cinchona derivatives. If it happens to be your worst enemy that has ague, there may be some satisfaction in loading him up with quinine until he imagines he can hear the ringing of the devil's hammer and anvil as he mends his broken pitchforks. But if it happens to be your best girl that has ague, there is more satisfaction getting a cure without such horrible fancies. But this very virtue has contributed to its discredit. The doctor believes a perceptible cinchonism is necessary and prescribes what he thinks, and what probably is, a proper amount and the expected does not happen. So the bird that can sing and won't must be made to sing, and he increases the dose until the patient's stomach rebels. He is convinced that it is fit only for the strongest stomach. So he waits until he has a patient with an ideal stomach and to him gives a dose like the largest one tolerated by the former patient and is rewarded by having him inordinately cinchonized, and it is perfectly patent that the drug is too uncertain in composition and in its action for use. He does not remember that yesterday he gave John Doe two grains of American sulphate of quinine and John had a perceptible headache and some deafness, and that last week he gave Richard Roe ten grains of German sulphate of quinine and Dick's head was not affected at all. Now, is it not just as patent that one grain of the American sulphate contains more than five times as much of the alkaloid as one grain of the German does?

Another fallacy relates to the age at which men and women should marry. Not seldom do we see it stated, and that by men who should know better, that women should be at least 25, and men 30 or 35 years before marrying. If this were the rule and it was supplemented by a rule prohibiting widows from remarrying, and both were rigidly adhered to during ten succes-

sive generations, the nation would have become extinct, unless, indeed, this result was prevented by the increase of bastards. The laity know, if the gynecologists do not, that as a rule first confinements are more dangerous to both woman and child than subsequent ones are, and that the danger to both increases as the woman's age increases, and that her liability to serious injury increases in a still higher ratio. Some years ago a man who had performed several hundred operations for the repair of lacerations along the genital tract of women, said that if a woman's first confinement took place when she was 18 years old any laceration of her perineum sufficiently extensive to need repair was almost positive proof that instruments had been used, and that when her first confinement took place when she was 16 or 17 years old, there was always a slight lateral tear of the cervix which nature repaired if permitted to do so, and any subsequent tear was always caused by meddling midwifery.

This coincides exactly with my observations, and if it is true, other gynecologists know it to be true, and if they know it to be true and advocate late marriages, is it that thus they paraphrase the petition, "Give us this day our daily bread"? But late marriages are equally bad for men. Let the country doctor speak for his clients. Every city doctor whose clientele includes all grades of society, knows that the men who reach the age of 35 years, and who have escaped having had some of the venereal diseases constitute a small minority, and that of this minority the ratio who then marry and infect their wives or children is nearly twice as great as is the ratio of men who marry and infect their wives before they are 25. To advocate late marriages is practically to advocate the spreading of venereal diseases. It is claimed that by mating matured men and women the mental and physical standard of their progeny will be raised. At one time I was disposed to accept that part of the claim relating to the mental possibilities of their children, and expecting to have my opinion changed to a conviction, began to make some observations for myself. At that time I was engaged in teaching, and a few years intimate acquaintance with all grades of pupils, from the grammar down, compelled me to reverse my opinion, and time has strengthened my conviction that the claim is a fallacy. The assertion that vital stamina of a race is lowered by early marriages, is disproved by the Chinese. Originating in a temperate zone, where they are unusually prolific and their endurance unsurpassed, they are equally prolific, and their des-

cendants continue to be prolific, and to transmit all their characteristics in regions of arctic cold and of tropic heat. Yet, for thousands of years the majority of their women have married at from 15 to 17, and their men at from 17 to 20 years of age. The custom of considering that the girl became a woman at 18 and the boy a man at 21 years of age is not among the unimportant ones we have received from our ancestors. Nor was the choice of these ages an accident. It was their crystallized wisdom, gained through ages during which war was the most necessary business of life and hardy warriors the most valuable assets of the State. It was never expected that all would abstain from marrying until that age was reached, nor that all would marry as soon as it was reached, but for the individual and the State it was a safe average and the achievements of those nations that have adhered to the custom has proven the wisdom of their choice. The fallacy that if unmarried men wish to maintain their procreative power unimpaired they must have sexual intercourse is disseminated by many who have a legal right to the title doctor. If we join to this that other fallacy that only mature men should mate with mature women (as they understand maturity), and we have a combination as pernicious as the most malevolent can wish. This fallacy is condemned by both moral law and statute law, and the wisest and best men through all the ages have testified that the law is good. It may be that the non-professional man who teaches this fallacy will be permitted to enter the plea of ignorance to extenuate his guilt and mitigate his punishment. But the man who affixes M. D. to his name proclaims to the world that he is Doctus, (Learned) and for him to plead ignorance is to proclaim himself an impostor, and we must believe that if, at the bar of final judgment he advances this plea, he will be condemned to bear the punishment due to the impostor, as well as that justly due to one who has taught false doctrine.

A Monstrosity ; Its Causes and Sequences

By Samuel Knox Crawford, M. D., LL.D.,
Chicago,

At the risk of seeming tediousness and irrelevancy, I must begin at the beginning of the story of the following story, else it will have been incomplete when done.

At the close of the civil war in 1865, there appeared over most of the States of the north, an epidemic of ophthalmic dis-

ease, of various shades of character, and varying degrees of severity.

Having on retirement from military service settled in an inland small city of western Illinois, and having by invitation associated myself in practice with another physician of my own age, temperament and length of experience, who declined the practice of ophthalmology, naturally much of that work fell to my share, and amongst other patients the mother of a family of two daughters and two sons, living six miles west, and one mile north of the city, demanded my attentions.

She had been totally blinded for a year or more before I saw her, and in great physical pain and mental distress withal. I visited her at her home and made a careful and painstaking investigation of her case, and the environments, which resulted in an announcement encouraging in diagnosis, and flattering in prognosis. The older daughter and oldest child, was a young woman of 18 and the younger daughter and youngest child, was a miss of 12, and the boys were aged 16 and 14 respectively, and all were of normal growth and healthful development, and of nero-sanguine temperament. The older girl was housekeeper and breadmaker, while the younger one was the personal attendant and nurse of the afflicted mother, and the boys were the ruddy father's farm hands. The case was manifestly, originally, one of purulent ophthalmia from infection from a soldier, home on sick furlough, whose disability was from ophthalmic affection, and in a neighborly way the good woman had called to offer sympathies and express hopes of early recovery.

The conjunctivitis had been severe, and the resulting granulations were profuse, and the sensibilities of the globes very acute. I treated it, on this my first visit, by inverting the upper and everting the lower lids and applying crystals of sulphate of copper and rinsing with rose water, atropine and morphine, and taught the girls how to make the same applications at stated intervals until my return, three days later.

The family had been greatly downcast and perturbed over the wife and mother's illness, and were naturally much elated over promises of early improvement and ultimate recovery. On my return at the appointed time, I found marked improvement from the treatment employed and the regime enjoined.

As my first visits were to commercially cost five dollars each, it was planned that the patient thereafter, was to be brought to my office on Wednesdays and Saturdays,

and thereby save the long drive for me and the expense to the family.

In all farming communities, and especially those where corn is the principal crop, the women of the farm families do most of the town-going and marketing and shopping acts during all of the active farming season, and it was therefore arranged that the daughters were to come to my office alternately with their mother and act as assistants in her treatment, that they might become proficient in applying remedies at home in the intervals between visits to the office, and this plan was carried out to the letter and on schedule time, till the case was pronounced cured by both physician and patient.

It was observed from the beginning that the girls dreaded the manipulations of the treatments and mostly from the unsightly appearances of the lids at the time of the application of remedies, but notwithstanding their shudderings and squirmings, they both made excellent nurses and efficient assistants.

After a brief period of office treatment, a young man of the city began calling on me at my office to make earnest inquiries concerning the improvements in the case of Mrs. M. from the country, and incidentally to get acquainted with me and speak casually and occasionally of himself as I thought, and seemed especially interested in her rapid improvement and final complete recovery. After the dismissal of the case, I saw no more of the M. family for many weeks, but before many months had elapsed I heard in a casual way that the older daughter was married to the young gentleman who had so kindly called on me in the interests of her mother.

Another fearful western winter had come and almost gone, when I was summoned one evening at dusk amidst a forbidding storm of wind and sleet to visit the tenant house of a batchelor farmer, fancy stock raiser, dog fancier, and man of the turf and chase, about six miles northwest of the city to attend the young wife, in confinement, of the young gentleman in question, who was now in the employ of the farmer, and lived in the squallor incident to a hut in the timber about two hundred yards distant from the farmer's own hovel which stood in the edge of the woodland, with stacks of hay and rows of feed troughs between.

After facing the blizzard too fierce for man or beast to confront, amidst darkness too intense for any eye and over a road too horrid for any civilized community, I arrived at the bedside of the lying-in woman at 10 P. M., after a four hour's struggle against circumstances, to find her alone

save the presence of the good mother, and surrounded by nothing but filth and want, but in the severest throes of labor. At six the following morning I delivered her of a *monster*, without spinal column from the atlas to the sacrum, and with inverted and everted eyelids of both eyes grown together like two raw surfaces in plastic surgery, but otherwise it seemed fairly well formed and breathed regularly and cried constantly but feebly for as much as five minutes and then died in the arms of the nurse while I was giving the exhausted mother needed attentions.

During the long night of labor and the dismal storm raging without, and while the objective and subjective commotions continued within, I had abundant time and opportunity, to say nothing of inclination, to mentally review the history of my acquaintance with the women present. The labor was not claimed to be premature, and therefore my mental calculations placed the time of conception about midway between the time of the beginning and date of the conclusion of my treatment of the ophthalmic disorder of the mother, and after the monster was produced and the unique condition of the eyes was noted it afforded matter for serious reflection and I longed to take the specimen with me, but the still raging storm and the well-nigh impassable state of the roads, and the exhausted condition of my own fabric forbade the attempt, and so the *specimen* was lost to science, but ample opportunity offered for further and careful inquiry into all the circumstances entering into the case, in that the patient from her puerperal state had a long and painfully slow convalescence with peritonitis, metritis, and phlegmasia dolens as prominent factors in the case, to be followed by all the sequences of septicemia, I saw her every day for two months and did not dismiss her until six months had gone by.

Meanwhile the story of her girlhood was rehearsed by herself and mother over and over again; and the facts were developed that some months, perhaps six or eight, prior to my introduction in the family, she and the man who was to be her husband first met, and the case one of mutual love at first sight, and a courtship began that was prosecuted with vigor and persistence on the part of the young man, and was in no way disagreeable to the young woman until it became painfully apparent that her mother was to totally and permanently lose the sight of both of her eyes, when she declared that in such an event she would not entertain the subject of matrimony nor accept the wooings of her lover and dismissed him taking up the burdens of housekeeper

with a firm determination of remaining single to care for parents, brothers and sister till all should pass away, and when the improvement of her mother's eyes became established the young man renewed his suit with even more ardor and vehemence than before, and the flame that had been smothered in his sweetheart's breast by the dutiful impulse toward her afflicted mother, was rekindled and responded to her lover's advances with warmth, and "they twain loved not wisely but too well."

This renewal of courtship transpired while the girls were treating their mother at home and assisting me at my office to do the same, and while the horror at the appearance of the inverted and everted lids was most intense, and as nearly as dates could be recalled and ascertained, conception must have occurred about two months subsequent to the renewal of courtship.

During these weeks and months of treatment the girls were in the habit of practicing the manipulations on each other and sometimes on their brothers of turning their lids that they might become the more proficient in the treatment of the mother, and after her sight became sufficiently restored to note appearances they often exhibited to her the imitation appearances of herself during treatment, on one another, and thus appearances became an earnest and horrid passion in the M. family.

During these weeks, too, after the renewal of the courtship and the rekindling of the love flame the mingled emotions of love, and the fear that a relapse might occur in her mother's affliction, or that she herself might be stricken with the same infection, or that something or other might happen to again interrupt the course of the current, stirred her being throughout its whole extent in its eye as in its cosmos from center to circumference, as all such states of soul influence the nutrition of the body, and this function of hers was especially affected.

Menstruation appeared on time to the day at the first period after sexual canal congress had been initiated, and with this assurance and the increase of passion consequent on repetition, the act was indulged at weekly intervals and results awaited till the second menstrual would appear with intense solicitude, but it did not appear, and hence the soul of the girl was violently perturbed.

Throughout the corn, cattle and hog belt of the great west many of the farmers, if not most of them, keep their swine, large and small, in the same inclosure and often with their feeding cattle, and the result is that when pigs when grown to the size of from sixty to eighty pounds are very invit-

ing objects for the table, and it is the custom for families to have baked and otherwise prepared shoat the same as they employ chicken in the various forms in which culinary art designs it.

The older brother of our girl was an adept at slaughtering and dressing the pig for the pot and oven, as his sister was mistress of the art of cooking everything edible for the table in toothsome form, and about a week subsequent to the unmistakable suppression of menstruation, he killed and dressed a shoat in his inimitable fashion and added a new stroke to its preparation by the deft removal of its back-bone from the neck to the tail, and these were left intact to retain form to the carcass. He was, as most men have been during their earlier years fond of inflicting surprises on womankind, and brought the product of his skill quietly into the kitchen and laid it on the table face downward showing plainly the absence of the spinal column as a marked feature of the preparation, and in this condition and position the sister found it on her return from a temporary absence, and suffered a severe shock to her nervous system.

Man has the fructifying power and stamping privileges in the continuation of the species, but woman furnishes the life-flood that permits and the development of the new being, and as all cellular development and molecular action of the human fabric are dominated by the atomic being within the molecular body constituting vitality itself, and the higher and greater form of the same force we call soul, and these act in obedience to the laws of vitality in general and the governing principles of the spiritual body throng the nervous apparatus.

The beginning of man is difficult, if not beyond the limits of present possibilities, to differentiate from the lower orders of organization, and begins in a fructified egg without a shell and so small as to be microscopic in size and exceeding wary of observation, and at the moment of fructification impregnation occurs, and when the vitalized egg becomes attached to some point along the mucous tract that by a high state of excitement has been prepared for its engraftment by the wise provisions of nature then conception has transpired, and the female nervous system takes hold of the new organism, shaping and completing its mechanism after the fashions of known ego and cosmos, and her product is as much a part of herself as either half of her body and the nutrition of her body is always under the dominant influence of her soul and, therefore, liable to the obliquities consequent on mental perturbations, the outgrowth of trouble and agitated solicitude. That men-

tality is the functionation of the soul upon the brain and the means by which the atomic, or spiritual world, is brought into intimate relationship with the molecular, or physical world, there can be no doubt.

Every cell inherits from its parent cell, forms a lease of life stamped with imagery by the fructifying microscopic spermatozoon, and goes into the aggregations of the new being with the attributes of life, which are all the manifestations of activity with *contractility* as principal.

Normal cellular activity implies equilibrium between catabolism and anabolism, and failure in either of these movements from a disturbing influence either from within or without has an abounding effect on the combined operations of the nutritive functions throughout the organism. That *thought* is the sequence of atomic action, on molecular products of the anabolitic act in metabolism, and that the character, or quality, of such molecules depends upon the quality of those furnished by the bioplasms engaged in the metabolic process, there can be no doubt.

The real origin of a book, or paper, is lost in the obscurity of the unconscious, or half conscious provinces of the intellect and the will. Now that the present paper is about completed and ready for delivery to the public, I search for its genesis with the hope of making the reasons for its existence clear, and with the desire to furnish a measure of justification for the effort.

Through a period of more than a quadrennium I have been steadily engaged with the composition of these paragraphs, the plan of which suggested itself to my mind, though dimly, fully three decades before it began to be executed.

The careful student of embryology under the light of recent investigation will have soon been led straight to the conclusion that the nuron of the maternal parent plays the part of power behind the throne in the nutrition, and therefore in the development of the embryo. In this there are clear illustrations of all the principles involved in the foregoing propositions, and it is matter for deepest regret that the large number of cases of similar character occurring over the country, both in season and out of season, in public places and in out-of-the-way places, cannot be made to advance science and enlighten and, therefore, protect humanity by the preservation of all the monstrous products and searching the history of their causes and sequences as can only be done by a general system of hospitals in the capitals of counties throughout the extent of our civil governmental structure of our country, and as many other country

towns and inland cities as the necessities demand.

The stories that the well filled museums of such hospitals would tell, would be an object that would be daily in evidence in the great post-graduate school, which has more influence in the attainment of higher medical education than any other one influence that can be brought to bear upon science. The rural homes of our country contain the greater proportion of our more than seventy millions of people, and more, but not one of them is a fit place for the specialist to work. No one man can fully grasp the science of medicine and surgery and successfully embrace every department in his practice. There are few homes, amongst the many, in which it is conducive to posterity, for the specialist's work to be done. There cannot be the shadow of a doubt that the mental impressions or shocks made upon the mother of this monster were responsible for its not being a perfect child. There are few homes where special work can be done, where either mothers or coming mothers may not be influenced to such an extent that their future offspring may not suffer as a sequence.

The uncanny hovel wherein this monster was born has no place for an accouchement to transpire, and the circumstances of the immediate surroundings of the lying-in woman and the internal abrasions resulting from the forcible passage over a highly congested, and still more highly irritable mucous membrane of uncovered sharp pointed, bony structures made it beyond the possibilities of an accoucheur to use such preventive measures as would avoid the calamitous sequences that followed and the painful convalescence following a narrow escape from death that lasted six months, and caused complete recovery to be postponed for one year before a possible second pregnancy could occur.

Hospitals in the capitals of counties and other desirable places furnish the means of collecting all such specimens, as the one described, and of preventing the necessity of special work in private families, and accouchements amid squallor, infection, and inclemencies such as even strong men can feebly endure, to say nothing of poor, frail human kind, in the form of woman.

Obstetrical practice and gynecologic work cannot be conducted safely and successfully for patients and easily and, therefore, comfortably for the physician, if they both are attempted at the same time, by the same person. Specified times and inevitable irregularities, are contradictions, and cannot be reconciled. Popular hospital resorts and a division of work will remedy the

great difficulty, and the only way to overcome difficulties is to overcome them, as Grant said of the long talked of resumption of specie payment.

If hospital facilities had been accessible the ophthalmic infection in question would not have occurred, and years of affliction would have been avoided, and if prevented, in that case the monstrosity would not have been, but instead, in all probability, a healthy and well formed begotten in wedlock would have been the issue of love, and a year in a hovel with feet dangling in the dark river between life and the unknown beyond would not have transpired, and the most exposed drive of my life would not have been necessary, and the hardest work of a quarter of a century of a busy professional life would not have been suffered.

The author in this day of the deliverance of this bit of his work to the public does not flatter himself that he has greatly enlarged the boundaries of human knowledge, but hopes that he may have somewhat cleared the horizon in this part and in that, and to have visited in thought and reflection some unfrequented parts of the temple of humanity, and to have aided in his limited sphere in putting the house in order for his successors in the succeeding century to this the most splendid century known to the peoples with whom he is allied in descent and with whom he joins in fondest hopes of a glorious destiny.

Gonorrheal Conjunctivitis; Conjunctivitis Neonatorum; Pseudo-Membranous Conjunctivitis.

Remarks made to the ward class of the Philadelphia Hospital.

By C. A. Veasey, M.D.; Adjunct Professor of Diseases of the Eye, Philadelphia Polyclinic, Demonstrator of Ophthalmology, Jefferson Medical College, Etc.

It affords me much pleasure to be able to show you to-day a group of cases that illustrate some of the more common diseases of the conjunctiva, many of which are first seen by the general practitioner and with which you should, therefore, be able to deal, especially if of the milder types.

The first is a case of *Gonorrheal Conjunctivitis*.

This young man presented himself a few days ago with the history of having had sore eyes for two days that had been rapidly growing worse. The inflammation had commenced as a smarting and burning of the conjunctiva, a sensation as if sand or

grit were beneath the lids rubbing over the cornea, an increased amount of lachrymation—in other words, a feeling of general discomfort in the eyes.

At the time of his examination the lids were enormously swollen and the ocular conjunctiva so edematous that it extended over the margins of the cornea, threatening the destruction by pressure and forming a crater-like depression with the cornea at the bottom. Large quantities of pus were oozing from between the lids and a thin whitish membrane had commenced to form on the tarsal conjunctiva. A history of urethral gonorrhœa of five days duration was obtained with the ocular symptoms beginning on the third day.

As you see him to-day after having been under treatment for ten days the lids are still somewhat swollen and red, the upper lids overhanging the lower on account of the great thickening, and there is still some discharge, though very little can be seen, as the nurse is keeping it clean by frequent irrigations. There is also some of the membrane remaining, though the amount is markedly diminished, and you will please observe as I turn this lid the great thickening of the tarsus and retro-tarsal folds. You will also observe that which is to be most dreaded in a case of this kind, a perforation of the lower portion of the left cornea which has followed a corneal ulcer that began beneath the edematous ocular conjunctiva before the swelling could be controlled and into which the iris has prolapsed. The other cornea has escaped and is as you see, perfectly clear. The patient is pale and has become much debilitated by his continued suffering and confinement to bed.

The cause of this disease, as you all know, is the *gonococcus* first described by Neisser. The secretion containing these germs has been directly transferred in some manner from the urethra to the conjunctiva—probably by means of the fingers, wash-bowl or towels. They spread rapidly and penetrate beneath the surface of the conjunctiva. As a rule they occur in the form of a diplococcus, but occasionally as a tetracoccus, arranged in characteristic groups, the individual cocci being ovoid in shape and measuring about 0.7 m. and 0.5 m. in the large and short diameters respectively. They are stained readily by the basic anilin dyes and are decolorized by Gram's method.

A case like this may at the beginning be mistaken for an ordinary purulent conjunctivitis due to other causes, such as, for example, might arise from the meddlesome domestic application of tea-leaf or other

poultices, but the bacteriological examination which can be readily made will at once disclose to you the true origin of the affection.

As to the prognosis, in spite of all treatment that can be instituted, many cases get well with marked impairment of vision, on account of the corneal complications. The pressing of the ocular conjunctiva upon the corneal margin frequently destroys its nutritive supply to an extent sufficient to start a corneal ulcer, and if once formed it is almost impossible to prevent perforation taking place.

The treatment of this class of cases is two-fold, prophylactic and curative. Every patient who has gonorrhœa should be warned of the danger of inoculating either himself or some one else and instructed concerning the burning of all urethral dressings and the careful employment of individual towels, sponges, etc. When a patient is first seen, if only one eye be affected, the other should be protected as far as possible. This is best done by means of a protective dressing introduced by Dr. Buller, of Montreal, consisting of a flattened watch crystal which is fastened in position by means of adhesive plaster, or what is better still, circular pieces of gauze covered with collodion. In the patient before us this precaution was of no avail, as both eyes were affected early. Isolation should be insisted upon and in hospitals, especially, if there be surgical cases in the wards, is absolutely necessary. All appliances used in treating the disease must be thoroughly sterilized and all dressings should be burned. Any one having to do with the nursing of the case must be cautioned in regard to the virulence of the disease and particularly guarded against infection by the sudden gushing of the pus from between the swollen lids as the latter are separated.

In the acute stage, when the lids are swollen and the conjunctiva edematous the continuous application of cold should be employed. This is best done by means of a number of pieces of lint about two inches in diameter that are placed upon a large lump of ice to keep them constantly chilled. From the ice they are transferred two or three in thickness to the closed lids, and allowed to remain for a minute or two when they are replaced by fresh pieces. In some affections it does no harm, perhaps, to employ constantly the same pieces, transferring them from the ice to the eyes and *vice versa*, but in virulent cases like gonorrhœal conjunctivitis I believe it is important to throw away all pieces that have been in contact with the eyes and employ

fresh pieces to prevent any possibility of continuing the disease with the old secretions. The continuous application of cold may also be obtained by means of Leiter's tubes.

Should these applications faithfully employed not produce a rapid diminution of the tension of the lids, and the integrity of the cornea be threatened by the great pressure, one should not hesitate to divide the external canthus. By the production of bleeding the engorgement will be materially lessened and by the increased length of the palpebral fissure the great pressure upon the cornea will be removed. In fact, it is so essential that this great pressure be rapidly removed that some surgeons have not hesitated to split the lids vertically and fasten the divided portions upon the brow, afterwards correcting the deformity by a plastic operation.

The next matter of importance is to keep the eyes as free as possible from all discharge. To do this effectively the conjunctival cul-de-sacs must be irrigated every fifteen minutes, or less frequently, according to the severity of the case, and this must be kept up day and night, with somewhat less frequent irrigations at night, if practicable, to permit the patient to secure much needed sleep. For this purpose many solutions have been employed and recommended, among them the following: Boric acid, gr. xvi— $\frac{3}{4}$; permanganate of potassium, 1-2000; formaldehyde, 1-2000; bichloride of mercury, 1-5000; peroxide of hydrogen; aquæ chlorima; argentamin 1-5000; protargol, 10 %—40 %; toluidin blue, 1-1000 and many others.

After all, perhaps it does not matter so much what solution is employed provided it is employed thoroughly and each time the irrigations are made that every particle of pus is removed.

Once daily after the establishment of the free secretion of pus, the lids should be everted and the surface of the conjunctiva painted with a solution of silver nitrate gr. x— $\frac{3}{4}$, the excess being washed off before the lids are replaced. Should this fail to diminish the quantity of secretion after a few days use stronger solutions may be employed, but it is always better and safer to give the weaker the first trial. Many remedies have been suggested within the past few years to take the place of the silver solutions in the treatment of this class of cases, among them argentamin and protargol, but in my own experience none of them equal the former for the purpose for which it is employed.

Should there develop at any time during the treatment of the disease a corneal

complication as indicated by the appearance of haziness or corneal ulceration, the cold applications should be at once replaced by warm fomentations and a drop of a solution of atropin sulphat, gr. iv— $\frac{3}{4}$ instilled into the conjunctival cul-de-sac twice daily. If the ulcer continues to spread rapidly it must be treated along the lines usually followed in the treatment of corneal ulcer under other circumstances, viz: the use of topical applications of tinct. iodine, formaldehyde, 1-50, bichloride of mercury, 1-200, or if these fail the application of actual cautery. Sometimes finely powdered sterilized iodoform dusted into the conjunction or an ointment of iodoform, $\frac{3}{4}$ — $\frac{3}{4}$, not only assists in promoting the reparative process of the ulcer itself, but also brings about a marked diminution of the purulent secretion. Should the ulcer threaten to perforate, paracentesis through its floor may be performed and may possibly limit the extent of the prolapse of the iris. But after perforation has occurred, and the iris has become firmly wedged into the opening, as in the case before you, I believe it good surgery to let it alone until all signs of inflammation have abated. If the prolapse be excised during the progress of the disease it may open a pathway for the entrance of microorganisms into the interior of the eye that will result in complete purulent destruction, or panophthalmitis. After the eye has become quiet it is oftentimes possible to restore useful vision by the performance of an optical iridectomy behind that portion of the cornea that has remained clear.

The second case is one of a similar nature, though occurring in a very young child.

This baby was brought to the hospital on the sixth day after birth with almost similar symptoms to those in the case you have just seen. On the third day after birth there was a slight reddening of the eyes which was soon followed by enormous swelling of the lids and the appearance of a profuse purulent discharge. The symptoms which followed and the progress of the disease have been very similar to the first case, with the exception that the corneas have remained clear. It is a case of the so-called *conjunctivitis neonatorum*.

As a rule two classes of cases of this character are recognized in infants: one in which the infection is due to the gonococcus and which we generally call specific, and the other in which the infection is due to some of the pathogenic organisms, such as would be found in a severe vaginal discharge of the leucorrheal type.

The prognosis, fortunately, is much more favorable in the infant than in the adult, for, as a rule, if seen early before any corneal complication has set in, and baring a few exceedingly malignant cases, almost all the eyes can be saved.

In the treatment of these cases prophylaxis plays a most important part. The proper sterilization of all instruments, towels, surgeons and nurses hands, in fact, of everything coming in contact with the vaginal tract during the birth of the child, must be rigidly enforced. Cleansing vaginal injections immediately before birth, and the treatment of a severe vaginitis, either of the specific or non-specific type, if it is known to exist for some time before birth, is of the greatest importance. Should there be but little vaginal discharge of a non-specific character, the thorough cleansing of the lids and of the conjunctival cul-de-sacs with a saturated solution of boric acid as soon as the child is born is probably all that is required; but if there be a suspicious or persistent vaginal discharge, such as can be found in most of the cases that are brought to us here, it is important to adopt more stringent measures. Perhaps the best of these is the plan of Cr  d  , which consists of cleansing the eye-lids and conjunctiva of the new-born babe as soon as it is born with a saturated boric acid lotion and immediately afterward to drop into the eye one or two drops of a 2 per cent. solution of nitrate of silver. This sometimes produces a slight conjunctivitis of itself which readily subsides, however, upon the application of a few cool compresses of a boric or salicylic acid solution.

When the disease has asserted itself the treatment differs very little from that outlined in the case of gonorrh  al conjunctivitis except that we must bear in mind that we are now dealing with a new-born babe instead of an adult and must, therefore, avoid all harsh measures. The cold compresses in the stage of edema, the frequent irrigations continued day and night, the application of nitrate of silver to the everted conjunctiva after the establishment of the free secretion of pus, are required here just as in the adult.

This little patient in the adjoining bed is suffering from an attack of *pseudo-membranous conjunctivitis*.

There are two affections of the conjunctiva with which we have to deal, the principal characteristic of which is the formation of a false membrane, the pseudo-membranous, or croupous, and the true membranous, or diphtheritic conjunctivitis.

The baby is about ten months of age and

was brought here with the lids considerably swollen, there being some muco-purulent discharge, lachrymation and photophobia, but the principal characteristic is this whitish membrane which you see so tenaciously clinging to the tarsal conjunctiva, although it is not nearly so marked now as it was a couple of days ago.

The bacteriological cause of this affection has not been definitely established, though the staphylococci are most frequently found together with a few streptococci. In the exceedingly severe variety following measles, scarlet fever and influenza, very frequently we find the streptococci in a pure state, so that some authors have suggested a streptococcus conjunctivitis, and these cases are exceedingly dangerous, not only as regards vision, but life itself. The mild forms of pseudo-membranous conjunctivitis, like the one before us, occur most frequently in the young and may come on during an attack of croupous inflammation of the respiratory tract.

In the beginning it is almost impossible to make a differential diagnosis from diphtheritic conjunctivitis from the clinical symptoms alone. We are told that in one the eyelids are soft and the muco-purulent discharge is profuse; in the other the lids are hard and tense and the discharge less profuse, that in one the membrane is readily detached, leaving a bleeding surface beneath; that in the other it is not easily detached and does not bleed so readily. But, gentlemen, we sometimes meet with cases of croupous conjunctivitis so severe that they look for all the world like beginning diphtheritic cases, and have marked constitutional symptoms, and the only way we can positively tell the difference is by the bacteriological examination. In one we find large quantities of staphylococci or streptococci, in the other large quantities of the Klebs-L  ffler bacillus. Now, as you perhaps know, the Klebs-L  ffler bacillus, or one resembling it, has been found normally upon the conjunctiva without creating any inflammatory trouble, but it has not been found normally there in large quantities, and in a more or less pure state, where there was not present a severe membranous conjunctivitis with all the constitutional symptoms of diphtheria. It is important, therefore, as you can readily see, to make a bacteriological examination early, as the treatment of the two diseases are materially very different.

In the little patient before you, in whom the conjunctivitis has been of a mild type we have employed cold compresses to reduce the edema of the lids, and hourly irrigations, of a solution of potassium chlorate,

gr. x-3i. As pointed out by Dr. Knapp, this drug is of much benefit in these cases, and I know of nothing else that causes such rapid disappearance of the membrane. Other solutions may be employed for the purpose, and in the later stages of the affection the application of weak solutions of nitrate of silver may be cautiously tried, but as a rule, they increase the severity of the inflammation and have to be abandoned.

It must be borne in mind also that in some of these cases the membrane continues to reform for weeks or even months in spite of all treatment, and this is known as the recurring form of the affection.

At a future period I hope to be able to show you some of the other varieties of conjunctival diseases

Mercury.

Some years ago French and German physicians investigated the effect of mercury on the blood. They demonstrated that small doses increased the hemoglobin and acted as a tonic—and since then tonic doses of mercury have been extensively employed in treatment of syphilis. Neuman, Nothnagel, Rossback, Van Swieten and others have spent much time in demonstrating the effect of mercury on the blood, both in small or tonic doses and in large ones. They showed that mercury in small doses increased the hemoglobin and that, as stated above, in large doses, long continued, it decreased this important element and hence was detrimental. What becomes of the mercury given to patients? It has been found in every tissue and organ of the body, especially the liver, kidneys, intestines, testicles, etc., etc.

We are all familiar with its effect on the bowels when given in too large a quantity or continued for too long a time; viz.: inflammation, and finally ulceration of the large intestines—and this effect is produced whether given per ore or by inunction. One important fact is frequently lost sight of—that when given by the mouth it is absorbed by the portal radicles and hence must pass through the liver. Here much of it is deposited as metallic mercury. That which passes through this organ is deposited in the bones and other tissue. The white blood corpuscles, our phagocytes take it up and carry it everywhere, depositing as stated above. What wonderful police power they have! not only attacking our bacteriological foes, but also engulfing in their capacious maws the remedies we use. Marvelous thing is the white blood corpuscle! When mercury is given by inunction it does not have to pass the portal

of the liver and hence more readily reaches every tissue and organ by means of these white blood cells. And in these tissue is gradually taken up and eliminated. Much time may be required for this latter work, and the mercury will be found in the urine and feces within a few hours after being given. These organs continue their work until it is all eliminated—in most cases requiring months to get rid of the accumulations of a prolonged course of treatment. One investigator found it present in the feces twelve months after the course of treatment was discontinued. What of the theory, then, that a week's time will eliminate all we use? Evidently this is a mistaken notion. It is true that one dose given per ore or by inunction will be largely eliminated in twenty-four hours to forty-eight hours, but it is otherwise after a prolonged course of treatment.

One very important point which should not be lost sight of is this, that the hemoglobin of the blood of syphilitics is increased by the use of mercury from the very beginning of treatment, and continues to increase until the normal is reached, when, if the remedy is continued, the opposite result begins, viz.: a decrease. When is the time to stop? The microscope should be used to answer this important question. Generally speaking, inunctions for three to four weeks in moderate doses carries the patient to top of the hemoglobin hill, and everything beyond is down grade and hence hurtful.

Mercury may do much harm to these patients in this way and by its injurious effects on the kidneys. One of these investigators found that in ninety-seven cases of syphilis the exhibition of the remedy was followed by casts in the urine in every one, to disappear in a few weeks after the remedy was discontinued. But the demonstration shows this is another way in which it may be hurtful, and a way in which the profession has not been accustomed to look for its deleterious effects.

The old classical symptom of pytalism may be a very small matter compared to the irritation of the kidneys.

From the above the following conclusions may be drawn:

First—The blood should be examined at the beginning of a mercurial course and its hemoglobin estimated, and a watch kept on it from time to time, otherwise we may do these patients much harm.

Second—The urine should be examined before beginning the treatment, and repeatedly while it is in progress, that we may know whether these organs are being injured.

Third—That patients may be seriously injured before the timehonored signal, "ptyalism," presents itself.—*The Hot Springs Medical Journal*.

Tongaline.

At this season of the year when physicians are called upon to treat many rheumatic and neuralgic conditions, the successful practitioner naturally desires a reliable remedial agent.

There is nothing which will correct rheumatism, neuralgia, grippe, nervous headache, gout, sciatica and lumbago more promptly and thoroughly than the Tongaline preparations.

Tongaline is the logical prescription for these complaints as it contains the anodyne action of Tonga, the antiseptic and anti-rheumatic action of Salicylic Acid, and the anti-spasmodic action of Cimicifuga, the cathartic and diuretic action of Colchicine and the diaphoretic action of Pilocarpine.

Hence it will be observed that Tongaline is constructed for the purpose of inducing general elimination which it accomplishes by its stimulating action on the liver, bowels, kidneys and pores, whereby the poisonous and viscid secretions which are the cause of the diseases mentioned above are speedily removed.

Attention is called to the very important fact that all of the salicylic acid used in Tongaline is made from the purest natural oil of wintergreen, and according to the most eminent medical authorities this salicylic acid is the only kind which should be taken into the system as the use of the synthetic product is apt to be attended by very injurious consequences.

In children enlarged lymphatic glands about the neck are frequently due to enlarged tonsils or to the presence of adenoids. The throat must, therefore, always be carefully examined in these cases, for removal of the tonsils or adenoids will cause the glands to subside. In adults enlarged glands are very suggestive of the presence of malignant trouble and necessitate careful examination of the whole mouth and throat.

F. E. Harrison, M. D., Abbeville. S. C., says: I have used Celerina in appropriate cases, and can heartily recommend it to all who wish an elegant preparation, combined with undiminished therapeutic activity. It is peculiarly fitted to such cases as delirium tremens, headache from debauch or excessive mental or physical exertion.

Sanmetto as an Internal Remedy for Genito-Urinary Conditions.

While fully realizing the superfluity of further testimonials concerning a remedy so well and favorably known to the entire medical profession as is Sanmetto, yet as I possess an extended knowledge of its reliability based on several years' clinical experience and on the treatment of hundreds of cases in which it has proven itself eminently fitted to lighten the cares of the genito-urinary surgeon, I am perhaps invested with a certain authority which should permit me the privilege of adding my meed of praise. In all the inflammatory conditions of the genito-urinary tract, from the meatus to the pelvis of the kidney, the administration of Sanmetto is invariably beneficial. It not only renders the urine bland and unirritating, but also exerts a specific action on the inflamed tissues, soothing and restoring the tonicity of the parts. Its tonic action on the prostate is of such a nature that it proves of equal advantage in case of either hyperplasia or of atrophy and there is no remedy so uniformly successful in the treatment of atonic impotency or pre-senility. I have found it of inestimable service in the preliminary preparation of cases requiring surgical interference, and, combined with salol, use it constantly to secure urinary anti-sepsis. I am fully of the opinion that Sanmetto represents all that could be hoped for or desired as an internal remedy for genito-urinary conditions.

H. R. WEBER, M. D.

Univ. Md. School of Medicine, 1886,

Member Am. Med. Assoc., etc.

Chicago, Ill.

After surgical operations and severe hemorrhages, regeneration of the red corpuscles is a matter of great importance. The saline, watery and albumenoid elements are quickly restored by resorption, but without iron the blood is practically functionless. Armour's Extract of Red Bone Marrow is especially indicated because it increases hemoglobin and stimulates cell proliferation. It is a hemopoietic of the first class.

In cases of œsophageal stricture always examine carefully for aneurismal trouble of the aorta, as rough passing of instruments in such cases has led to rupture and sudden death. If the trouble should be due to malignant disease, an instrument might be forced through the œsophageal walls. If therefore, it does not pass quite readily, it is best to desist and perform a gastrostomy if necessary, in order to feed the patient.

THE

Charlotte Medical Journal.**Editorial Department.**

E. C. REGISTER, M. D.

J. C. MONTGOMERY, M. D.

Editors and Publishers.

No. 36 SOUTH TRYON STREET, - - -

- - - - - CHARLOTTE, N. C.

SUBSCRIPTION. \$2-50 PER YEAR,**THE MARYLAND MEDICAL JOURNAL.**

This Journal comes out in a new dress for the new year, and at the same time changes from a weekly to a monthly magazine. We hardly knew her in her new clothes, as they are tailor made and strickly up to the latest style.

We wish for our friend in her new suit an abundance of peace and prosperity for the new year.

MEDICAL EXAMINING BOARD OF VIRGINIA

We have just looked over the questions of this examining board at its regular fall meeting and they seem to be sufficiently fair and searching, and reflect great credit upon the ability of the men who compose the board.

One very serious mistake is made, however, by allowing the candidate to pick out five out of six questions, or six out of eight. In this way the standard is lowered just so much and the applicant may evade the very question which of all others would most test his fitness and ability.

We believe in the decimal system, give each man ten questions, fair and honest questions, and require him to answer all of them to the best of his ability. To give twelve questions and require an answer to only ten is to dilute the test and lower the standard.

We shall be glad to see this very efficient board reform its ways in this matter.

MEMORIAL NUMBER OF THE COLORADO MEDICAL JOURNAL.

The January issue of the Colorado Medical Journal is a memorial number to Dr. E. R. Axtell, its late editor and publisher.

The original articles consist of two papers by Dr. Axtell read before the Colorado State Medical Society, one on "Diuretics in Renal Dropsy; their Indications and

Uses;" the other on "Chronic Pneumonia."

The professional character of the man's life is strongly brought out in these articles.

The welfare of his patients was, to him, the greatest concern.

The kind of man he was is indicated in short character sketches by those who knew him intimately and who were associated with him in his everyday work.

As a student, as an official in the Medical Department of the University of Denver, as a preceptor, as an associate in journalism, as an attendant to the State Home for Dependent Children, the County Hospital, and the Colorado Cottage Home, he was a true representative of all that is great and noble in medicine.

In his untimely death the profession in Colorado has sustained a heavy loss, and the country at large must lament the death of a citizen so useful.

Medical journalism will also suffer in his absence, as he was pre-eminently a medical editor, he loved the work for the work's sake and the hardest task was but play, if in the end he could advance the cause he loved.

The manner of his death was heroic, in the faithful discharge of his duty and in the best interest of his beloved medicine he received the death-dealing wound. It was only a post-mortem wound and yet he died as nobly as did any far-famed warrior of old.

THE ANNUAL DISCUSSION OF THE STATE SOCIETY.

At the Tarboro meeting of the State Society in May the annual discussion will be opened by Dr. James M. Parrott, of Kinston, the subject being "The Continued Fevers of North Carolina."

This is a most interesting and practical subject in which all feel an interest. The most everyday member of the Society can have something to say on it, as all of us have been called on to attend cases of continued fever.

Dr. Parrott is well qualified to open this question thoroughly so that we may see into the very heart of it.

The discussion at Winston on the query, "Is there a Continued Fever in North Carolina which is neither Malarial nor Typhoid?" was a very enjoyable and profitable one. The admirable manner in which this question was handled by the leader, Dr. Royster, is easily recalled by those who attended.

This question of continued fevers lies at the very door of every doctor in the State who is practising. The manysidedness of these fevers is continual perplexity and

worry to us, and a plain and simple solution is a consummation most devoutly to be wished for. The value of a discussion of this subject is great and is assured by the ability of the leader, but that the greatest good may come out of it, it is necessary for all to take part in the discussion. After the formal opening by Dr. Parrott the question will be free to all and we desire to emphasize the duty of all to say something on this subject. Out of your own experience you may speak to the profit of those who hear.

This discussion can be made the most profitable ever held if every man will bring something, though only a mite, to add to the sum total of its result.

Begin to think about it now and when you come to Tarboro in May don't forget to talk about it.

THE PLAGUE.

Some time ago our attention was called to the fact that our Pacific coast must be carefully looked after if we wished to escape the plague, though a ship, at the time, was in quarantine at New York with a case on board. The value of the suggestion has been forcibly brought out by the appearance of the disease at Honolulu, and while it was seemingly stamped out in the beginning, it has recently broken out afresh.

As we have to look after the soldiers in the Philippines very closely, and as there is much going back and forth, too much care cannot be exercised in managing the scourge. Doubtless we have very little to fear if a case were brought right into our midst, but in our large cities we have slums and alleys, and their accompaniments dirt and filth, so it is best not to tempt fate.

We notice in this connection that the disease has occurred in Portuguese South Africa, in close proximity to the Boer and British armies now in the field. If it should appear among the soldiers the result might be awful. The man-made instruments of destruction seem to be very effective in that locality just now, reinforced by the plague the end would be appalling.

The soldier's life renders him susceptible to most epidemic diseases and the virulence of such diseases are increased by the unnatural crowding.

The rat has come to occupy a very important role in the cause and spread of this disease. And so ships carrying grain, as they are always infested with rats, are most dangerous to the ports at which they touch.

Mice, squirrels, monkeys, dogs, cats, fleas, bugs and flies, are likewise very im-

portant agents in the dissemination of the plague, according to Sambon. He recommends the following measures to check the inroads of the disease:

The avoidance of importing grain and other food stuffs from infected places; the destruction of rats in ships, especially when plague-infected or leaving plague-stricken localities, and in towns exposed to infection; the destruction of stray dogs and cats, as they may become carriers of the disease when rats begin to die; the destruction of fleas in houses and on pet animals; the isolation of plague patients, and the disinfection of all that comes in contact with them.

PROPER FOOD AND FEEDING.

The amount of advice we have had concerning what to eat and what not to eat, would fill a system and furnish reading for an entire wet spell in the Philippines. If we eat bolted flour we may expect dyspepsia; if we eat meat look out for lithemia; in pork trichinosis may be in hiding, and in richest milk the feverish bacilli is doubtless sporting.

And there is much in what we eat, much that concerns our health and strength, but there is much in *the way* we eat it. It is well to look out for germs, but the most virulent can not stand a bath in good, healthy, gastric juice. It is necessary that germs come, one way or another, but let it be woe unto them when they strike the gastric membrane.

Children now-a-days are trained to do most everything that is useless and expensive, let us train them to *chew*, to eat and drink *slowly*.

A glass of milk swallowed at a gulp, is to revert to the way of the ostrich, and to invite indigestion and feed bacteria, but to sip it slowly and leisurely is to make the warm rich blood and the strong throbbing heart.

Slow eaters are small eaters, because hunger is appeased physiologically through the nervous system. Lots of people never eat, properly speaking, they simply fill up. The delicate nerves of the stomach, which would tell us of hunger appeased, are overwhelmed and stunned by the deluge of drink and the rain of half masticated food. So they lie silent and the nerves of ordinary sensation give the signal when we begin to crowd our diaphragm up about the collar bone and we stop, not because we have enough, but because we are loaded and another mouthful might explode us.

It has been shown experimentally that it is very hard to infect a healthy animal by way of the alimentary tract though it be

fed upon the most virulent of the pathogenic germs.

It is next to impossible to avoid drinking at some time or other the typhoid bacilli, but we can do much towards improving the condition of the digestive organs.

How many of us take a glass of water in one stream, and yet even a horse takes time to drink.

Proper eating and drinking will go far towards rendering harmless many of the bacteria that threaten our life on every side.

There is something in what we eat and drink, but there is a great deal in the way we eat and drink it.

SMALL POX.

Quite a number of cases have been reported from different parts of the State, but from all accounts the disease is exceedingly mild. In many places the physicians have had to contend with the ignorance of the people and oftentimes with the prejudice of professional brethren, and these have been more difficult to manage than the disease itself.

The objector is a hard man to deal with in a prayer meeting, but the doubter in a small pox epidemic can do more to help the disease along than four can do to hold it in check.

The diagnosis of a typical case of small pox is not at all difficult, in fact it can not be mistaken for anything else, but like typical cases of typhoid and other diseases, they are few and far between.

The absence of some of the classical features of the disease, has characterized the small pox seen in this State for the past year.

The very mild character of the eruption has persuaded many that the disease has really never occurred. Small pox has such a fearful picture framed in our minds that we do not recognize it in the mild and insidious form. We can not imagine a bear nursing a baby and so refuse to believe it.

Of all the causes which have produced this change of character in small pox, vaccination is the most important and it should be the one easiest to bring into action, but, strange to say, those who are most afraid of the disease are often the last to submit to the virus.

The doubters are very much adverse to the vaccine, they may believe in the electropoise, Warner's safe cure, or even osteopathy, but they can not see the sense or use of vaccination.

No matter how mild the disease, a number of unvaccinated people in a community is a serious menace to the public health.

If a town could only figure out what one small epidemic, cost it, the authorities would not be satisfied until they had vaccinated every man, woman and child in a radius of ten miles. As it is they figure on the cost of a cheap pest house and a guard, and as they can be accurately measured in figures they rest at that and wonder what more could be done for the good of the people.

The enforcement of modern sanitary and hygienic laws is another important cause of the modification of this disease, but such causes are slow and cumbersome as regards a particular outbreak and are, therefore, much less effective than vaccination.

The early appearance of the disease this winter makes it reasonable to expect that we will have more of it during the coming two months, and it should be the aim and purpose of every physician to overcome if possible the dislike which people have for vaccination. There is no one thing that we may do, as indicating a real concern about the welfare of our neighbors as well as ourselves, that is more commendable and reasonable, than to be vaccinated.

THE MICROBE KILLER.

We have been on the hunt for some sure poison for the pathogenic bacteria, something that could be swallowed, or injected, or inhaled which would certainly kill the germs and yet not harm our own tissues. There are plenty of germicides absolutely sure in their results, as heat or corrosive sublimate, but we must have the germs in a test tube or a sterilizer to get the full effect of the destroying agents.

The germs free in the tissues are safe against attack unless we are willing to destroy the patient and his disease at the same time. We have seen a cowardly man in a fight run into a crowd to avoid being shot, and so the bacilli among the living cells laugh at our sterilizers and douche bags.

But suppose the crowd should turn on the man hiding for his life, then his very safety in one direction would become his death in another. This is what happens when we get well from many diseases, the home of the germ becomes uninhabitable and he is cast out.

We have lost a lot of precious time looking for specific medication, in tuberculosis for example, but are beginning to realize that there are other ways of killing a dog besides choking him to death on butter.

The best seed in the world cast upon hard, unprepared soil, yield but a scanty harvest, or more likely none at all, and so the seed of disease falling upon healthy tis-

sue bring forth no fruit. So instead of soaking the seed in blue stone let us pay more attention to the soil.

The battle with bacteria so far has only engaged the skirmish line and the outposts are doing most of the fighting.

It is time to reinforce the firing line with the heavy artillery. If we really want to carry the war into Africa, (to use a phrase which has become obsolete in the past few months,) we must attack the soil in which the disease germs grow, and render it unfit and unsuitable for their development.

But how are we to do this when a man is down, bedridden let us say, with tuberculosis; well, in that case, it is a hopeless task, but before that man came to his bed he suffered with a hundred "colds" that were neglected, or, what is worse, treated with cough syrups. A good time to put out a fire, is to have the flue fixed before the roof catches.

There are men who have typhoid fever and they have lived for twenty years in the open and daily violation of the most ordinary dietetic laws. We are always in a hurry to jump on the water supply after an outbreak of typhoid; it might be well if we would sometimes consider the food supply.

Of course, typhoid often comes in the water, but if the food was allright it would come and go. It is how it stays that runs up the mortality, and it stays because we have been sinning against the law of our stomach.

Some animals will attack a man only when he is down, some germs grow and flourish only after we have carefully prepared the soil, when we are weak and out of sorts then disease musters up courage and strikes us.

THE OBSTETRIC SATCHEL.

The duties of the general practitioner frequently call him to the lying-in chamber and he should always be prepared to respond to such calls without unnecessary delay. Obstetric cases are often emergency cases in the fullest sense of the word, and unless prompt assistance is rendered it may mean the sacrifice of a human life or possibly of two. Although confinement is generally accomplished without active interference by the accoucheur, or even in his absence, yet it is seldom possible to foretell when his services will be imperatively required. No one can predict with certainty just when labor will be completed and the only safe way to do is to respond promptly and then remain by the patient until delivery is accomplished. But if the physician delays

in answering a midwifery call he will often find upon his arrival that the critical moment is past, and he will be blamed for its accidents or robbed of the credit of its successful termination. Hence, it is best for us to waste no time in ransacking drawers and collecting instruments after being summoned to such a case, but, instead, keep the necessary things collected and packed in a suitable satchel ready for instant use.

In cities and large towns many physicians think a pair of short forceps is all the equipment they need for ordinary cases and these they carry in their pocket or hand. If the case proves difficult or they need something else they depend upon the nearest drug store to furnish it, or call a brother physician who is close at hand, or, if the distance is not great, send a messenger or telephone call to their own office for it. But in the country these cases are sometimes five or ten miles from town, and the accoucheur must go prepared for almost anything which may happen. Therefore, the obstetric satchel, containing those articles which are most often needed, or when needed are most urgently required, is a necessity to the country doctor which his cosmopolitan brother may possibly get along without.

In packing the obstetric satchel each one will have his own ideas of what it should contain; yet a few hints will not be out of place. In general it may be said the outfit should include everything necessary to enable us to attend to ordinary cases in a tidy and satisfactory manner, besides those other articles, as a Davidson syringe and obstetric forceps, which are frequently needed. In addition to these it should contain a few things which are only occasionally required, but when the indication for their use arrives they must be had immediately, or it will be too late. But on the other hand it should not contain anything unnecessary, or that may be found in every house; nor should it be loaded with instruments or other articles which are seldom needed and which there is always plenty of time to procure without danger to the patient. Bearing these rules in mind we can make a selection.

The first article, perhaps, which we should select is a rubber sheet about a yard and a half square. Nurses appreciate this and it will reflect to our credit and popularity if we do our work neatly and thus save the wash-woman unnecessary labor. A plain rubber blanket is to be preferred to any obstetric bed-pan yet invented as being cheaper, less cumbersome to carry and more convenient to use. It is also well to carry our own ligatures for the cord as they are often needed immediately upon our arrival and seldom have been provided by the

nurse. The best and cheapest are made by twisting together three strands of No. 12 thread and doubling. In my experience tapes are unreliable, as they can not be drawn tight enough; silk will stretch after tying so as to allow hemorrhage, and linen will slip. Then there should be included a Davidson syringe in perfect order, with rectal and vaginal tips, a female catheter, a large sized gum male catheter with stylet, a uterine douche, a pair of uterine dressing forceps, a set of Barnes' rubber dilators and a pair of obstetric forceps. These last should be of good length and strength, Simpson's, Elliott's and Benford's being, perhaps, the most popular in this country. These are to be preferred to the short forceps, as they are universally applicable, while the short ones are not, and obviously there is no necessity for both. Many physicians recommend some form of axis-traction forceps, but these are heavier and more bulky to carry, while the traction rods only afford an efficient means of applying force in the proper direction; but every physician ought to be able to do this with the ordinary forceps if he will recall the anatomy of the parts and the mechanical principles of parturition.

These are all the instruments we need to carry in the satchel, but there are a few drugs which are fully as important to have. Thus we need to include a bottle of whiskey, 2 ozs. of chloroform, a solution of chlorohydrate, 10 grains to the dram, an antiseptic lubricating oil, and $7\frac{1}{2}$ grain tablets of bi-chloride of mercury. Then we should carry a reliable fluid extract of ergot for use in case of after-hemorrhage, and 5 grain pills of quinine for feeble labor pains. If eclampsia should occur we would also need a fresh preparation of veratrum viride, croton oil or epsom salts and pilocarpine, either in tincture or tablet form. A hypodermic syringe with tablets of morphia and strychnia should always be carried in the pocket or satchel, as it is frequently demanded both in eclampsia and in other cases.

In caring for the infant it is well to abandon the time-honored treatment of the cord with tallow or vaseline and scorched linen, but use instead an antiseptic dusting powder and absorbent cotton, hence these should also be included.

If the satchel is packed to be of use in cases of abortion it must also contain a Sims' speculum, a tenaculum or vulsellum forceps, a steel dilator, a pair of placenta forceps and a dull curette or set of rinsing curettes. It should also contain some antiseptic less poisonous than corrosive subli-

mate; but there is no particular one which has yet come into general use.

Among the things to be left out of the satchel we will mention the following: the perforator and other instruments used in embryotomy, as being seldom used and only as a last resort, and after calling a consultant; the pelvimeter as unnecessary and bulky to pack; scales for the same reason; perineal needles, as very seldom required, except when the forceps have been improperly or ignorantly used; and scissors and pins, as they are found in every house. Of course, in hospital practice these things, with many others for the convenience of the accoucheur and comfort of the patient, can be provided; but when the outfit is to be made portable these unnecessary things should be left out to make it easier to carry and allow room for the more essential articles.

BOOK REVIEWS.

The Principles and Practices of Modern Surgery. For the use of Students and Practitioners of Medicine and Surgery. By John B. Roberts, M.D., Professor of Anatomy and Surgery in the Philadelphia Polyclinic; Mutter Lecturer on Surgical Pathology of the College of Physicians of Philadelphia. New (2d) and Revised Edition. In one very Handsome Volume of 838 pages, with 474 Engravings and 8 Plates in Colors and Monochrome. Cloth \$4.25, net; leather, \$5.25, net.

In this work the author gives to the profession in a condensed form the accepted and approved procedures of Modern Surgery. The rapid advances made in every department of surgery has rendered this the revised second edition necessary. It will prove a useful guide to the student in the beginning of his surgical work, and also assist the general practitioner in the solution of the surgical problems which may from time to time be presented to him. In accordance with these objects the book is eminently a practical one. It meets the requirements of both the student and practitioner, affording elementary instruction to the one, and serving as a book or reference in doubtful and complicated cases to the other. The work is divided into two grand divisions: General Surgical Pathology or Principles of Surgery and Special Surgical Pathology or Practice of Surgery. The opening chapter in the work is devoted to the all-important subject of inflammation, giving its causes, pathology, symptoms, varieties and treatment. A great deal of space has been allotted to modern

pathology and asepsis, without a knowledge of which no surgeon can do satisfactory work. The author has paid special attention to the subject of fractures and dislocations, having discussed them in a practical and comprehensive manner, because of their daily importance to the practitioner of medicine and surgery. In this the second edition the author has entirely rewritten the articles on Appendicitis, Diseases and Injuries of Joints, Diseases and Injuries of the Genito Urinary Organs, Dislocations, Excisions and Amputations, making them up to date in every sense. The volume has been indexed very thoroughly and can be used most satisfactory as a book of reference. The style of the author is clear and scholarly and the publishers' part of the volume is all that could be desired.

Dudley's Gynecology. A Treatise on the Principles and Practice of Gynecology. By E. C. Dudley, A. M., M. D., Professor of Gynecology in the Northwestern University Medical School, Chicago. New (2d) edition. In one very handsome octavo volume of 717 pages with 453 engravings of which 47 are in colors and 8 colored plates. Just ready. Cloth, \$5.00, net. Leather, \$6.00.

The first edition of this work having been exhausted in a year proves the success of Dudley's Gynecology, both in plan and execution. The author has covered the entire subject from a practical standpoint, avoiding all speculative and theoretical views. This edition is the result of a searching revision, visible not alone on every page, but also in the addition of seventy-eight pages, thirty-one new engravings, and six new full page plates. The book on pathological lines is divided into six parts, as follows: I. General Principles; II. Inflammations; III. Tumors, Malformations, and Tubal Pregnancy; IV. Traumatism; V. Displacements and Pelvic Massage. Part VI. Disorders of Menstruation and Sterility. By this classification, rather pathological than regional, the reader, especially in the part on inflammations, will gain a better grasp of the sequence and significance of each pathological process.

In this edition the functional disorders of Menstruation and Sterility have been brought together into four new chapters: Chapter LI. Premature Menstruation, Protracted Menstruation, Amenorrhœa, and Scanty Menstruation; Chapter LII. On Menorrhagia and Mentrorrhagia; Chapter LIII. On Dysmenorrhœa, and Chapter LIV. On Sterility. These chapters constitute an entirely new part of the book. Part VI. There will be found much new matter

in the chapters on Cystitis and Diagnosis. Every chapter and nearly every page will show evidence of revision, either verbal or essential. This work brings together the fully matured and essential facts in the science and art of gynecology, so arranged to meet the requirements of the student of medicine, and be a safe guide to the practitioner for reference. Every subject is clearly described with the author's method of treatment. The numerous illustrations are very clear and comprehensive. The edition is very handsome, and we commend it highly.

A Manual of the Diagnosis and Treatment of the Diseases of the Eye. By Edward Jackson, A. M., M. D. Emeritus, Professor of Diseases of the Eye in the Philadelphia Poly-clinic, &c., with 178 Illustrations and Two Colored Plates. Philadelphia. W. B. Saunders. 925 Walnut St. 1900. Price \$2.50 net.

This is a very practical, well arranged, and well written work on the diagnosis and treatment of diseases of the eye. After a careful and thorough perusal of its pages we can very loyally say that it will meet the needs of the general practitioner of medicine and the beginner in ophthalmology. Differing from many works of this kind, it is designed, and very thoroughly is this design carried out, to aid in the actual work of dealing with disease, and therefore gives the place of importance to the recognition and management of the conditions likely to be presented early in practice, rather than to the rarer diseases and more difficult operations that may come later. The work contains over six hundred pages and is divided into twenty chapters. We cannot comment on all of the chapters other than the subject matter under each one is very clearly and thoroughly treated. There is not a sentence that is obscure or uncertain in meaning. The first chapter is probably the shortest, but it is of great importance. It is entitled "The Study of the Case." Chapter twenty, the last one, is specifically devoted to the relations of ocular symptoms and lesions to general diseases. For practitioners in other departments of medicine and surgery this is the most important place of ophthalmology. The book is well issued by the publishers.

A Text-Book of Diseases of Women. By Chas. B. Penrose, M. D., Ph. D. Professor of Gynecology in the University of Pennsylvania. Surgeon to the Gynecan Hospital, Philadelphia. Illustrated. Third Edition. Revised. Philadelphia. W. B. Saunders. 925 Walnut St. 1900. Price \$3.75 net.

This the third edition has been carefully revised and many additions appear, rendered

necessary by the increase of our knowledge of gynecology. This volume is a complete treatise upon the Diseases of Women from the pen of one of our most distinguished professors and clinicians. He states in the preface that this book has been written for the medical student, that he has presented the best teaching of modern gynecology untrammelled by antiquated theories or methods of treatment. The author as a rule has adopted but one plan of treatment, which is a fine plan, because by having presented two or more methods of treatment confusion to the student is always the result. Another pleasant feature about the book is that all facts concerning the anatomy, physiology, and pathology have been omitted. This can be found in general text-books upon such subjects. The volume is of convenient size for handling, setting forth in concise words the science and art of gynecology of the most modern results of investigation and experience. The style of the author is easy and clear. The extensive experience of the author has enabled him to condense the result of recent research and put it into practical shape for the benefit of both students and physicians. The illustrations are remarkably good and deserves commendation; in fact, the book taken altogether is one of the best which has appeared in recent years upon this subject.

A Manual of the Practice of Medicine, Prepared Especially for the Students. By A. A. Stevens. A.M., M.D. Professor of Pathology in the Woman's Medical College of Pennsylvania, &c. Fifth Edition, Revised and Enlarged. Illustrated. Philadelphia. W. B. Saunders.

Steven's Manual on the Practice of Medicine occupies a very high position among the list of manuals from its points of excellence and usefulness. This book is particularly popular among students and extensively admired and used by practitioners. The one prime reason for the great popularity of this work is that there is nothing useless about it. You find the disease you look for and the etiology, symptoms, pathology, diagnosis, prognosis and treatment are given in a very few words, brief but complete. This is the fifth edition and it has been thoroughly revised and contains many important modifications and considerable additions. The chapter on Diseases of the Pancreas, the introductory chapter on Diseases of the Blood, and of the Ductless Glands, and the articles on Appendicitis, Angina Pectoris, Aphasia, Myxœdema, and Syringo-Myelia, have been entirely re-written. New articles

treating of acute cholecystitis, Tuberculosis of the Kidney, Gastropotosis and Enteropotosis, and Chronic Cerebral Leptomeningitis have been introduced. We highly recommend the book to our readers.

The International Text-Book of Surgery. By American and British authors. Edited by J. Collins Warren, M. D., LL.D., Professor of Surgery in Harvard Medical School; Surgeon to the Massachusetts General Hospital, and A. Pearce Gould, M. S. F. R. C.S., Surgeon to Middlesex Hospital; Lecturer on Practical Surgery and Teacher of Operative Surgery, Middlesex Medical School, etc. Vol. I. General and Operative Surgery. Philadelphia; W. B. Saunders, 925 Walnut St. 1900.

While we have many new works recently published on surgery, the authors of this volume, however, need offer no apology for its appearance. Modern surgery is still in the transition stage of its development, and physicians gladly welcome all new and useful matter in this progressive science. The authors have produced a reliable text-book of surgery embodying a clear but succinct statement of our present knowledge of surgical pathology, symptomatology, and diagnosis, and such a detailed account of treatment as to form a safe and reliable guide to modern practice. The work has been so arranged that Vol. I. is devoted chiefly to General Surgery, and Vol. II. to the various branches. The ever-widening field of surgery has been developed largely by special work, and by such means it has been made practically impossible for one man to write authoritatively on the vast range of subjects embraced in a modern text-book of surgery. In order, therefore, to make this work up to date in every sense, the authors have sought the aid of men of wide experience and established reputation in the various departments of surgery. Among the list of contributors will be found the names of Bird, Bradford, Burns, Bunell, Cobat, Cameron, Cheyne, DaCosta, Ernest, Fowler, Gay, Hamilton, Makins, McBurney, Monks, Parker, Pitcher, Pfaaf, Richardson, Smith, Spencer, Sulton, Tiffany, Hook, Warbasse, Warren, and Willard. These men are all writers of eminence in their various departments, and their ideas and opinions in reference to the different subjects herein treated will be read by physicians profitably and pleasantly.

The first forty-two pages of this work is devoted to Surgical Bacteriology, giving the structure and classification, the methods of Cultivation, methods of Examination, &c., &c.

The next chapters considered are Hyperemia, Inflammation, Local Infection and its

Terminations. Suppuration: Abscess, Ulcers, Sinus and Fistula are next considered. Surgical Pathology of the Blood is treated very ably in chapter IV. Following these we have the many diseases following in the course of surgery very clearly and forcibly discussed. The section on Fractures is one of the best in the volume. The chapter on Bandaging is very prettily illustrated. The volume taken from any standpoint cannot be excelled.

The chapters upon the different subjects have been carefully prepared, are short, concise and to the point. It is with a great deal of pleasure we recommend the work to all our readers.

A Manual of Surgical Treatment. By W. Watson Cheyne, M.B., F.R.C.S., F.R.S., and F.F. Burghard, M.D., and M.S., (Lond) F.R.C.S. In Six Volumes. Vol. 4. Lea Brothers & Co., Philadelphia and New York. 1900.

This volume is devoted to the treatment of the surgical affections of the tissues, including the skin and subcutaneous tissues, the nails, the lymphatic vessels and glands, the fascia, bursae, muscles, tendons and sheaths, nerves, veins and arteries, deformities. The first one hundred and forty pages is taken up with the subject of deformities, such as hammer toe, hollux valgus and bunions, flat-foot, club-foot, &c. The treatment given for these serious deformities is very complete and successful and is clearly illustrated. The second division, as stated above, is devoted to surgical affections of the tissues. The main plan of treatment for each of these diseases is based upon experience and the author has given the best methods of treatment from the commencement to the termination of the illness. The author does not worry or confuse you with a summary of many methods of treatment from time to time proposed, but gives exactly and in detail the best method, judging from his own experience. The work at once commends itself to progressive physicians.

Lea's Series of Pocket Text-Books. Histology and Pathology. A Manual for Students and Practitioners. By John Benjamin Nichols, M.D. Demonstrator of Histology, Medical Department Columbian University, Washington, D. C., and Frank Palmer Vale, M.D. Series Edited by Bern B. Gallaudet, M.D. Lea Bros. & Co., Philadelphia and New York.

This work of four hundred and fifty-eight pages is divided into three separate and distinct sections—Normal History, Pathology and Special Pathology. The three sections are very thoroughly and comprehensively treated and the excellencies of the book

stand out very prominently to all those who fortunately come into its possession. It presents all the essential facts relating to the normal histology and the pathological anatomy and histology of man in a systematic and concise manner. It presents the subject up to the most recent discoveries and developments, avoiding points unsettled and in doubt. The book is neatly printed, nicely bound and can be highly recommended to students and practitioners of medicine.

Christian Science, An Exposition of Mrs. Eddy's Wonderful Discovery, Including Its Legal Aspects. A Plea for Children and other Helpless Sick. By William A. Pennington. New York. E. B. Treat & Co., 241-243 West 23rd St. 1900. Price \$1.00.

This work expounds the dangerous teachings of our latter-day delusion, Christian Science, and the theory and limitations of medical legislation. The little book is divided into six chapters with an appendix.

The following subjects are considered: Christian Science and Its Legal Aspects, The Case Against Christian Science, Manslaughter, Christian Science and the Law, Christian Science Before the Law, How Far Can Legislation Aid in Maintaining a Proper Standard of Medical Education, The Evolution of the Apothecary.

The book is well written.

Children, Acid and Alkaline. By Thomas C. Duncan, M.D., Ph. D., L.L.D. Author of Text-Book on Diseases of Children. Philadelphia. Boericke & Tafel. 1900.

This work contains 148 pages and is divided into three classes, the Normal, the Acid and the Alkaline. In this work will be found the Methods of How to Manage Acid and Alkaline Babies, leading Acid and Alkaline Remedies, a Study of Peoples, Differences, &c.

LITERARY NOTES.

The topics editorially treated in the American Monthly Review of Reviews for February are the Nicaragua Canal proposition now before Congress, the Canadian and Erie Canal projects, underground transit in New York and elsewhere, the currency and business situation, the Treasury and the banks, the popular election of Senators, Mr. Beveridge's speech in the Senate on the Philippine question, our tariff policy in Puerto Rico and Cuba, the meaning of "neutrality" in the Boer war, and the strength and weakness of the Boer position.

THE JANUARY COMING AGE.—The January issue of *The Coming Age* opens the second year of this sterling review of twentieth century thought. The opening paper, which is sumptuously illustrated by finely executed photo-gravures, is a critical study of Mr. James A. Herne's new dramatic success, "Sag Harbor," which has been playing a hundred nights' engagement in Boston. Mrs. Reifsnider has given an entertaining sketch of the play, pointing out its ethical aspects in some well-chosen and timely observations. Mr. Horace Lewis, the popular actor, given a charming conversation on his Twenty-five Years Before the Footlights. The eight original essays are all of special interest and excellence. "The Gate Beautiful," by Prof. John Ward Stimson, is one of the most helpful discussions on the vital uses of art that has recently appeared. Dr. Henrik G. Peterson, the eminent Boston physician, contributes the first of four papers of rare value on "Applied Psychology: or, Hypnotic Suggestive Therapeutics." The *Coming Hygiene of Dietetics and Development*, by the late Prof. Joseph Rodas Buchanan, is a very strong feature of this issue. Rev. Charles R. Brown's social study, entitled "The Cities of the World to Come," justly merits wide reading. "The George Junior Republic" is the first of a series of papers on helpful social experiments which are promised for the ensuing year. "A New Prophet in the Choir of Progress" is a helpful study of Ernest Crosby's latest work. A poem of unusual excellence, by Miss Coletta Ryan, is also an interesting feature of this issue.

Among the notable contributions in *The Coming Age* for February are "Educational and Therapeutic Value of Hypnotism," by the eminent New York physician and author, Dr. R. Osgood Mason, M.D., A.M.; "The Ideal Philosophy of Leibnitz," by Prof. E. M. Chesley, A.M.; "Happy Hours in Mirthless Childhood," by Alma Calder Johnston; "Personal Atmosphere," by Annie Pillsbury Young; "Fra Elbertus and the Roycrofters," by B. O. Flower; "Shakespeare and the Development of General Culture," by Rev. H. C. Meserve; "The Referendum in Boston," by Prof. Frank Parsons; "Peace, Interior and Economic," by Bolton Hall; "An Unobjectionable Expansion," by I. L. Albert; "The Poems of Emerson" critically considered by Charles Malloy, president of the Boston Emerson Society; and "Poe and Emerson," compared by Leigh H. Irvine. There are several other articles worthy of mention, besides the regular departments;

but the above are papers which challenge the attention of all thoughtful men and women. The success of *The Coming Age* is well merited. It reflects the best thought of the time, and appeals to the moral no less than the intellectual side of man's life.

The Forum for February contains many articles of great merit, nearly all written by well-known authorities, Lieut.-Gen. Den Beer Poortugael, of the Holland Privy Council, contributes the leading article on "The Relation of England to the Transvaal;" an able paper is furnished on "The People's Party," by Senator Marion Butler, Chairman of the People's Party National Executive Committee. President Charles Dabney, of the University of Tennessee, writes a timely article on "Washington's University." Two papers on the Old-Age Pension Problem in England are contributed by two eminent men, the first by Michael Davitt, M. P., on "A Plea for Old-Age Pensions," and the second by Rt. Hon. W. H. Lecky, the brilliant English historian, on "Why I Oppose Old-Age Pensions." David Willcox throws new light on "The Futility of the Anti-Trust Issue," and William R. Thayer writes an unusually convincing paper on "Longevity and Degeneration."

The *Living Age* promises a paper on Robert Louis Stevenson's Letters, by Augustine Birrell, in its issue for February 10. There could scarcely be a more delightful combination of author and subject.

ABSTRACTS of the One Hundred Leading Articles of the Month.

Osteosarcoma.

A very interesting case of osteosarcoma, in which the superior maxilla, turbinate, palate, vomer and parts of the ethmoid and malar bones were removed with good recovery, is reported by Lanphear in the *American Journal of Surgery and Gynecology* for January.

The huge cavity was packed with iodoform gauze and the soft parts carefully sutured into place.

When the surfaces were entirely healed, an obturator was worn, made with an upright plate to fit snugly between the remnants of the facial bones and with a horizontal plate carrying teeth, so that the patient can eat and articulate fairly well.

The growth was found upon examination to be a giant-celled sarcoma, and after eight years there is no sign of recurrence.

Hemoglobinuria.

Hicks reports a case in the Virginia Medical Semi-Monthly for December 22d, following two months after an attack of quotidian malaria, lasting for ten weeks, but finally broken up with large doses of quinine. He had taken no quinine since and gave no history of syphilis.

Examination of the blood showed small, dark, irregular granules in the red cells, which were taken to be the granular forms of the malarial organism.

No "crescents" or other younger forms could be found.

He considered it a case of parasitic hemoglobinuria of malarial origin.

The treatment was rest in bed and saline purgatives.

The patient returned to duty on the fifth day, the parasite having disappeared from the blood and the blood from the urine. He suggests that this case may throw some light on the so-called "paroxysmal" type of hemoglobinuria.

Cystic Distension of the Appendix.

Wood, in the American Journal of Obstetrics for January, describes a case which was operated on for a large myofibromatous tumor in which cystic distension of the appendix was found and the organ removed.

As a matter of routine he examined the appendix after completing his work in the pelvis and was surprised to find attached to the extremity of the cecum a mass as large as a kidney or the link of a large bologna sausage.

This was tied off and the stump inverted by means of a purse string suture supplemented by two Lambert sutures.

The appendix measured 20 centimetres in length and 7 in diameter, and its walls were thin, tense and injected, containing a clear, transparent fluid, which was absolutely sterile.

The patient had not had any symptoms calling attention to the appendix and no evidences of appendicitis, either acute or chronic.

He concludes that in nearly every case of cystic distension of the vermiform appendix recorded there were no subjective phenomena arising from the condition, and that in the majority of cases it was discovered accidentally.

That when the cyst finds its way into the inguinal canal there is danger of causing its rupture by taxis, as actually happened in Van Hook's case.

The possibility of mistaking a large cyst of the appendix for a floating kidney must be borne in mind. In a thinner patient

such a mistake might easily have been made in the case passing under his observation.

The Hospital Treatment of Melancholia.

Babcock, in the International Medical Magazine for January, discusses the treatment of acute and curable forms of melancholia.

He divides the curable forms into acute, agitated and stuporous.

The first indication is to combat sleeplessness and this is done by the scientific use of massage, static electricity, cold baths and sponges and well regulated out-door exercise, leaving a very limited field for the use of hypnotics.

The second indication is to keep the patient well nourished. Salines and intestinal antiseptics should be administered with the first food given artificially. For forced feeding give three eggs, four ounces of expressed meat juice and one quart of milk twice daily.

Lavage, careful attention to the bowels, constant nursing, alteratives and excitomors as quinine, strychnine, or nuxvomica, iron, arsenic, coca, hypophosphites and bitter tonic are indicated.

Opium should not be used except cautiously in the agitated form.

Melancholia with stupor should be treated as above with special attention to the eliminative functions. Weir Mitchell's rest cure is applicable in this form. The cold pack for sleeplessness.

The thyroid extract should be tried, remembering that in many cases no mental improvement occurs until the thyroid has been discontinued, when a mental and physical reaction takes place which does not cease until convalescence is well established.

Gall Stones in the Common Duct.

Samuel, in the American Practitioner and News for December 15th, recommends an incision from opposite the 8th or 9th costal cartilage to 2½ inches above the umbilicus, making an angle that is extended along a line parallel to the free border of the costal cartilages.

When the stone is found do not waste time trying to push it back into the gall bladder or into the bowel.

The opening into the duct is better left open.

The gall bladder should be opened for drainage of a diseased organ.

A choledochotomy call for a cholecystotomy at the same time, the only exception is in absence of gall bladder or contraction making drainage impossible.

Food and Drug Inspection.

The State Board of Health of Massachusetts has been looking after the food and drugs of the State for the past 17 years and their work has been of immense value to the people.

The articles most liable to adulteration are milk, butter, spices, coffee, syrups and molasses, cream of tartar, honey, vinegar, jellies and jams, olive oil and certain kinds of canned goods, says Abbott, the Secretary of the Board, in the Boston Medical and Surgical Journal for January 25th.

Eleven thousand five hundred dollars annually has been appropriated for the past four years.

The essentials necessary for carrying on the work are, a sufficient annual appropriation, a well equipped laboratory, a general director, an experienced food chemist or analyst, and the collector of samples.

That those States that have no such system of inspection have an inferior food supply (so far as relates to articles liable to adulteration) is susceptible of proof, since occasional inspections made in those States have shown this to be the case.

There can, therefore, be no reasonable doubt that the system is well worthy of adoption in all communities. It is now in force in almost every large city on the continent of Europe as well as Great Britain, and commends itself for general adoption everywhere, until the day shall come when man will no longer line his own pockets by defrauding his neighbor.

Laryngeal Stenosis.

In catarrhal laryngitis, if counter irritation, simple purgatives, antipyretics and antiphlogistics fail to relieve we should resort to intubation, says Merriman, in the Kansas City Medical Index-Lancet.

Paralysis of the abductors of the vocal cords requires an intubation or tracheotomy.

Enlarged glands should be removed with the knife.

Laryngeal stenosis due to a false membrane is always diphtheritic and should be treated with antitoxin.

In the majority of cases he prefers intubation to tracheotomy, but in cases of diphtheria when preparing for intubation, prepare also for tracheotomy.

Intubation should not consume more than 30 seconds, as every effort that is a failure is detrimental to the child.

He concludes that we have not used every available means in laryngeal stenosis until intubation or tracheotomy has been tried.

Excision of High Rectal Carcinoma.

Senn, in Galliard's Medical Journal for January, reprinted from the Philadelphia Medical Journal of September 30th, says that Krase's operation is unjustifiable and should not be done. He says that resection of the coccyx will give plenty of room and that the additional room gained by resecting part of the sacrum is so little that it is not worth the risk to patients' life.

He reports two cases in detail which plainly show the objection to the sacral route has a clinical basis.

In the first case the excision necessarily included the sphincters and during the operation it was found impossible to bring the proximal end down to a level with the anus, so a sacral anus was made from necessity.

In the second case the lower portion of the rectum was left intact, as the disease had a high origin. The sphincters were preserved and the two ends were sutured together for its anterior two-thirds.

Radical operation for carcinoma is contraindicated when the proximal limits of the tumor are beyond the reach of the index finger; when there is extensive involvement of the retro-peritoneal glands and marked extension of the disease beyond the rectal wall.

In the first case mentioned above $5\frac{1}{2}$ inches of lower rectum was resected, recovered with permanent coccygral anus and partial control.

In the second case there was a circular resection, temporary coccygeal anus, recovery with full use of sphincter muscles.

Nasal Obstruction.

Many of the immediate and remote effects of nasal obstruction are brought out by Reynolds in the Medical Age for January 25th.

The warming and moistening of the inspired air are very important.

Diseases such as anemia, marasmus, hay fever, asthma and laryngismus stridulus, may be cured by relieving the nasal stenosis. Reflex cough, pharyngitis, deafness, etc., may have their origin in nasal stenosis.

For hypertrophy of the turbinates he recommends chemical caustics as chromic or glacial acetic acid, nitrate of silver or nitric acid, and the electric or galvano-cautery.

The saw and gouge or trephine run by the electric motor he has found most convenient and useful for removing prominent portions of the septum.

He reports three cases, all improved under appropriate treatment.

Gonorrhea; Its Dangers to Society.

In the Medical News for January 20th, Neisser concludes his article on this subject.

We all know that it is often responsible for articular rheumatism. Its infection is persistent and a man supposedly well may infect his wife months after contracting the disease. The indication is to cure a gonorrhea at once before the serious and intractable complications and sequelæ have come on.

While the general mortality is perhaps influenced by this disease, he says the morbidity of the population is influenced in a very striking way. There is an enormous loss of working strength and wages.

Sickness of the wife of the working man means disaster. Ten to twenty per cent. of all blindness is due to gonorrheal infection. Crede's method has diminished the number of cases greatly in the past few years.

Many sterile marriages are caused by a gonorrheal epididymitis in the male.

Out of 227 women, 221 were sterile because of gonorrhea, and in 42 of these cases the women had been infected by their husbands.

Gonorrhea is a social danger for the people and requires the most careful attention from the authorities who are responsible for the public health.

The Death Rate from Nephritis.

Wilkinson, in the Texas Medical Journal for January, gives the death rate from nephritis in 140 cities of the United States for 1898.

Charleston, S. C., has the high rate, 1 in 386 of population, New York City 1 in 1,765, Washington 1 in 955, St. Louis 1 in 1,681, New Orleans 1 in 752, Mobile 1 in 558, Lowell, 1 in 963, Springfield 1 in 663, Albany 1 in 621.

The author is inclined to the bacillary origin of the disease and notices that wherever consumption prevails there Bright's disease is common.

The table is very useful and will repay careful study.

Vaccination after Denudation of the Skin with Caustic Potash Solution.

Fielder, in the Medical Record for January 27th, gives the result of a series of experiments with Hutchin's method of vaccination.

Instead of scarifying with the point or knife, caustic potash is used to take off the top skin.

He concludes that this method is less painful and less terrifying as it does not

draw blood. Its disadvantages are that it takes more time and skill; it is difficult to denude a small enough area, and it is less certain than scarification.

Finally, the writer believes that the disadvantages named, together with the fact that a rather elaborate equipment is required, makes the KOH method impracticable for use in wholesale vaccinations such as are performed by public vaccinators. As to its value in private practice, if it be deemed important in any particular case, such as that of a very nervous child, to avoid terrifying him, or to spare him the slight pain caused by scarification, this method may very well be tried; but unless the physician is skilled in the use of the method, or unless the virus is so active that it will "take" no matter how it is applied, he must not be surprised if failure is the result.

Continence as a Factor in Health and Disease.

Remondino, in the Pacific Medical Journal for January, has a continued article on this subject.

For the imaginative and amorous continence is often harmful and impossible to endure, though the physician should be extremely careful in his management of such cases.

To some people no matter how hard they work physically or mentally or both passion and desire will come. And for this class treatment often fails and we must advise legitimate gratification.

The moral and physical man are inseparably blended in our natures, one reacting on and influencing the other.

Exceptionable cases can not be made the basis of the proper treatment of all the rest and so for the most of us a broader self control in all the departments of life will result in a better condition of our sexual desires.

The Chemical Rays of the Solar Spectrum as a Remedial Agent.

Finsen's treatment has been used in lupus vulgaris, lupus erythematosus and in alopecia areata with good results, according to Chambers in the Canadian Practitioner and Review for January.

Finsen's method is simply to pass sunlight or the arc light through an ammoniated solution of sulphate of copper which absorbs the greater part of the heating rays, but allows the chemical rays to pass on.

Small pox is treated by placing the patient in a room with dark red window glass or thick red curtains to protect the skin from the chemical rays.

When and How Shall We Operate for Uterine Fibroids.

In all cases of symptom-producing fibroids treatment should be inaugurated at once, says Manton in the Physician and Surgeon for December.

Medical treatment is temporizing and futile. When the fibroid uterus has reached the size of a six-months' pregnancy the line of demarkation for myomectomy has been reached, but operators of small experience should restrict their manipulations to growth of a much smaller size than this.

When myomectomy is impracticable then total ablation is demanded.

The cervix is an important structure in the vaginal vault and should be left.

He recommends the intrapelvic method of treating the stump.

The point is emphasized that fibroid tumors of the uterus are not always the harmless and benign neoplasms generally supposed and that we should not look on them with indifference and delay active measures if we would do our duty to the patient.

Principles Versus Methods in Railway Surgery.

Bouffleur, in the Railway Surgeon for January 23rd, emphasizes the fact that it is impossible to practice surgery according to a fixed rule, that method is not so important, but that principle is indispensable.

To illustrate, in intestinal surgery the principle is to keep the lumen open, the method may be by suture, bone plate or Murphy button.

We should never become a slave to any one method, but we must always be impressed with the principle involved.

In fractures it is not so important to use this or that particular extension or splint, but remember the principle.

The same in dislocations, amputations and what not.

Disease of the Rectum and Anus.

Ferro, in the Medical Dial for January, discusses the diagnosis of these conditions, which is very dependant upon a careful examination. The general practitioner is inclined to make a very superficial examination of the patient or even none at all and the man goes away with a prescription none the better for coming.

A careful history in detail is first to be gotten from the patient, then a digital and instrumental examination should be thoroughly done and we are then able to treat the case somewhat intelligently.

Fractures of the Skull.

Trephining must be reserved for the following fractures: subcutaneous fractures in adults with marked depression, subcutaneous fractures attended by focal symptoms, all compound fractures, and all fractures compound or subcutaneous complicated by hemorrhage from the middle meningeal artery, according to Senn in the Cleveland Journal of Medicine for January.

He advises that every fragment, even if completely detached, be saved and placed in proper position. If the pericranium is detached from the skin it should be sewed separately with fine catgut.

In meningeal hemorrhage, if the bleeding point can not be reached from the seat of fracture, the main artery must be exposed and tied in the temporal fossa.

No injuries of the skull are too extensive to be despaired of, and none too slight to be ignored.

Extensive Burn with Peculiar Course.

Long, in the Medical Council for January, reports a case of burn in a boy four years of age extending from the occiput to the buttocks.

Under treatment granulations sprang up and skin grafting took well until about seven weeks from the date of the injury when gangrene suddenly swept over the entire surface, destroying in one day all the granulations, new skin and chances of recovery.

The father who nursed him constantly during the last days developed a most malignant case of putrid sore throat from which he made a bare recovery.

The trouble was attributed to the streptococcus.

The doctor believes in homing pigeons, not for treatment, but as messengers to deliver calls.

Incipient Melancholia.

The diagnosis, prognosis and treatment are discussed by Puntin in the Western Medical Journal for January.

The following symptoms are important in the diagnosis: mental depression, insomnia, headache, loss of weight, changes in attitude and physiognomy, loss of appetite and marked constipation, morbid introspection with selfish inclinations.

The prognosis is usually good, especially when isolation from home can be enforced.

The treatment is to overcome the malnutrition by moral persuasion, by drugs, hygienic measures, mechanical appliances and surgical operations.

The Knife versus Electricity in Tubal Pregnancy.

Electricity is the agent *par excellence* for the destruction of the ovum in the early weeks of tubal pregnancy prior to rupture says Packard in the Journal of Electro-Therapeutics for January.

But as it is very rare for the case to be in the physicians hands at this time, electricity from natural limitations holds but a small place in the treatment prior to rupture. The rupture may be downward between the broad ligament with or without hemorrhage, and in such cases the knife is preferable or to let alone as the patient rarely dies from this condition.

The tube may rupture into the broad ligament without hemorrhage with continuation of the life and development of the fetus. In such cases electricity is indicated to secure the death of the fetus and every day's waiting after the fetus is destroyed makes the conditions more favorable for surgical intervention. The mortality rate from immediate section in such ruptures is extremely high.

To summarize then the knife is indicated in every case of upward rupture of the tube, accompanied with hemorrhage, urgent.

May be used in cases of downward rupture of the tube with hemorrhage (pelvic hematocoele), not urgent.

After death of foetus and atrophy of placenta, to remove the lifeless products of gestation.

Electricity should be used in cases when the tube is still unruptured, rare.

In cases, either of upward or downward rupture, without hemorrhage, when the fetus has survived and is still alive at the fifth, sixth, or seventh month.

The Principle of Fixation in Fracture Treatment.

In fractures, the bones should be put in the correct position and retained there until reunited says Tracy in The Medical Times and Register for January.

The treatment of Lucas-Championniere by systematic movements and massage is advocated in simple fracture.

Plasterparis dressing gets a black eye, on account of its interference with early massage and imperfect fixation.

The proper splint is one that is conformed to the limb and not the limb to the splint.

Manufactured splints are an abomination and no surgeon should use them.

Wood plastic splint material is recommended because of its porosity, strength, lightness and its plasticity for adjustment.

The Most Important Point in the Treatment of Appendicitis.

According to Ochsner, in the Hot Springs Medical Journal for January, this most important point is the natural elimination of the appendix, that is the omentum and small intestines apply themselves around it in such way as to isolate it from the general peritoneal cavity.

So in the catarrhal form the patient soon recovers, and even in the suppurative form we have only a circumscribed, harmless, abscess.

He however admits that in case the small intestines are drawn away from the omentum we may have general infection in the peritoneal cavity. He recommends rectal feeding and lavage if nausea and distention.

He considers the treatment contraindicated in very emaciated patients where the omentum may be too small to cover the appendix and in patients where the attack comes on immediately after taking a large meal, particularly if indigestible food.

It would seem that there is entirely too much trusting to luck in such treatment and a simple incision would be better than to wait for the abscess to be circumscribed.

Examination of the Urine in Epilepsy.

The urine of 23 patients, 12 women and 11 men, was collected and examined as soon after a seizure as possible by Klein and the results reported in the New York Medical Journal for December 30th. The time of collection varied from ten minutes to five hours the average being an hour and a half. Very little polyuria was observed, the specific gravity ranged from 1007 to 1026 the average being 1020.

The color was mostly amber, the reaction being acid in all but two cases.

Albumin was present as a faint trace in 15 of the 23 cases.

Glucose was not found in any of the cases.

The urines of the same patients were also examined during a comparatively long interval between seizures but it did not differ from normal urine.

Fracture of the Skull.

Gaines, in the Alabama Medical and Surgical Age for January, reports a case of fracture of the skull from direct injury in which the middle meningeal artery was cut. The trephine was used and the wound packed so as to control hemorrhage, but six days afterwards it was found necessary to enlarge the opening in the bone and tie the artery, which was done with catgut, the patient making a good recovery.

The X-Rays in Diseases of the Chest.

In the Boston Medical and Surgical Journal for January 18th, Williams writes of the value of the X ray examinations in the less frequent diseases of the chest illustrated by their use in those cases where aneurism is present or suspected.

He stated that aneurisms of the thoracic aorta may be seen by the X rays before there are physical signs. This method of examination may give us greater assurance of the absence of an aneurism of the aorta in suspected cases than any other evidence that we can have.

He reports the examination of 34 cases, 15 having typical aneurisms, 6 had more or less dilatation of some portion of the arch, 1 showed an outline suggestive of aneurism but there was no pulsation and on autopsy a mass of glands was found. The remainder gave normal outlines in the region where an aneurism had been suspected.

In 13 of the 15 cases the aortic arch was the seat of the aneurism; in one of these there was a second aneurism in the innominate artery also; in the fourteenth case there were two aneurisms, one in the innominate and another in the subclavian artery; in the fifteenth case the aneurism was in the subclavian artery. Eleven of these cases were males and four females; 11 were between thirty-eight and forty-five years of age; two were thirty-three; one was forty-nine and one fifty-nine and one twenty-nine. A syphilitic history was obtained in four cases. Pain was present in 12 cases, and alteration of voice in 11. Laryngoscopical examination was made in 7 of these last cases, which showed paralysis of the vocal cord. The physical examination of 12 out of 14 of the cases of aortic aneurism was given in the hospital records; in five cases there were no physical signs of aneurism; in eight cases the heart was enlarged, and in five of these there were murmurs indicative of valvular defects, four of which were aortic and one mitral. Arteriosclerosis was found in the three cases in which an autopsy was made. No nephritis was found in any case.

Inversion of the Uncut Appendix.

Baldwin, in the Medical Record for January 20th, describes his method of inverting the uncut appendix.

The meso-appendix is tied off and cut and stripped from the appendix, all adhesions having been broken up, the appendix is inverted by pressing on the tip with the head of a needle, for which a probe is substituted, as the appendix enters the cecum. If any obstruction is felt the manipulation is

completed with the fingers. A single stitch is taken across the depression in the bowel, and the stump of the meso-appendix is brought up against it.

Fecal concretions may be forced into the bowel before beginning inversion.

Of course, in some cases, it is impracticable.

He advises inversion as a routine procedure in connection with laparotomies.

He says that he has found a healthy appendix in less than 10 per cent. of all abdomens opened. The evidences of disease usually consist of thickening, more or less obliteration of its lumen or adhesions.

Diet in Lithemia.

Conklin, in the Medical Bulletin for January, says that meat is not a suitable food for the lithemic.

Raw eggs, vegetables except peas, beans and lentils, milk, whole wheat bread, rice, oatmeal, rye meal and fruits will constitute the best diet.

Alcohol in all forms should be denied, and with it the after-dinner cigar.

Tea, coffee and cocoa should not be allowed. The proper drinks are water, milk, fruit juices, caramel cereals or other brands of roasted cereals.

A bright sparkling cider not too old and made from sound fruit is often an advantageous drink for the lithemic.

Propylaxis of Typhoid Fever.

A good way to disinfect the discharges from the bowels and bladder is with saturated solution of copperas says Miller in the Medical Fortnightly for January 15th.

A 1 to 20 solution of carbolic acid is also recommended.

Bed and body linen should be changed at least once a day and boiled or immersed in carbolic acid solution 1 to 40.

Feeding utensils should be washed in boiling water after use.

Plenty of fresh air in the sick room and have all drinking water boiled.

The same care should be taken with the milk used as it is often the source of the infection.

The Diagnosis and Treatment of Diphtheria.

Rankin, in the Columbus Medical Journal for December 20th, says that the diagnosis must rest upon evidence of two kinds, clinical and bacteriological. The latter is more exact, but can not be relied upon to the exclusion of clinical data.

The treatment he sums up in one word *antitoxin*.

Electrolysis for Aortic Aneurism.

Two cases of aortic aneurism treated by electrolysis are reported by Hare in the *Therapeutic Gazette* for January.

The first was a sacculated aneurism of the descending portion of the aortic arch.

The operation was performed in March, 1898, and in four weeks the patient had gained 12 pounds and was able to walk about, having been bedridden before. Seven months later there was a return of the pain, dyspnea and cough and the patient died from exhaustion.

The second case was a man aged 48. The growth had eroded the 2nd, 3rd and 4th ribs and the costal cartilages to the left of the sternum and had been in bed 7 consecutive months. The most prominent part was elevated $2\frac{1}{2}$ inches above the chest and there were 3 spots in which the blood was evidently near the surface.

The needle was introduced into the apex of the growth and the ten feet of gold wire inserted and the current turned on, being gradually increased from 10 to 100 milliamperes and continued for one hour and thirty minutes.

The patient was comfortable throughout the sitting. He improved for 3 weeks, but a month later a second operation was deemed advisable and lasted one hour when consolidation ensued. Seven months after the first operation, the growth having extended to the left, the patient died from rupture of the sac.

An autopsy, unfortunately, was not to be had in either case.

Mastoiditis

McCaw, in the *New York Medical Journal* for December 30th, emphasizes the importance of the early surgical treatment of mastoiditis. The general practitioner too often overlooks these cases in their early stages from pure carelessness and even the secondary effects are not looked upon with any concern by many until it is too late.

The simple operation is usually all that is necessary in acute cases while the radical is reserved for cases following chronic supuration of the middle ear.

The conservative plan of treatment should be first tried for at most a week or ten days in threatened mastoid involvement and in the mild acute cases, unless dangerous symptoms arise.

Operative interference should be instituted in acute case where there is sagging of the postero-superior canal wall or where the infection is of a virulent nature and in all cases complicating chronic otorrheas.

Antitoxine Results and Diphtheria Definitions.

There are still men who seriously doubt the efficacy of antitoxine in diphtheria.

Rupp, in the *New York Medical Journal* for January 27th, says that statistics are the main arguments in favor of this method and they are very misleading, for while they are always obvious, their origin may be very obscure. The Klebs-Leoeffler bacillus is not the sure and certain cause of diphtheria and with the reputation of this bacillus as the cause will go the reputation of antitoxin as the cure. He quotes Sorenson as treated 1,500 case, in 240 the Klebs-Leoeffler bacillus was found, though 208 of these developed no symptoms or sequelæ of the disease.

The mortality rate varies exceedingly in different localities and in different epidemics.

Some believers in the treatment give it only to ease their own conscience.

He advises us to make haste slowly, for "we'd better not know so much than know so many things that ain't so."

Biliary Calculi and the X-Ray.

After many failures by a number of experiments, Beck, in the *New York Medical Journal* for January 20th, tells how he succeeded in locating biliary calculi by means of X-ray photographs. A test is first made by exposing for 5 and then for 10 minutes, the most powerful focus tubes being necessary, and then by comparison the best time for exposure can be determined.

The patient should lie on the abdomen with a pillow under the symphysis as well as under the clavicle, the body being turned slightly to the right and the left side raised. The rays should not penetrate the abdomen vertically, but from side to side and should form an angle of about 45 degrees with the plate.

A skiagram taken by this method with an exposure of six minutes showed 2 large calculi in the gall bladder, one in the cystic duct and 3 in the liver, their elliptic shape, their size and diameter being well marked.

Non-Medical Treatment of Constipation.

In women constipation usually results from lack of exercise, failure to obey nature's calls, and the corset, says Nicks, in the *Inter-State Medical Journal* for January.

In the treatment he recommends a regular habit of going to stool, eat digestible food and fruits, drink plenty of water, exercise and massage.

Acute Rheumatism, Pleurisy and Pneumonia.

That some relationship exists between acute rheumatism, pneumonia and pleurisy is generally admitted. Syers, in Treatment for January 11th, describes in detail *rheumatic, pleurisy and rheumatic pneumonia*.

The only symptoms suggestive of a rheumatic factor at work may be profuse acid swelling and fugitive joint swellings and pain.

These symptoms may present themselves before the appearance of the chest trouble, during its progress or during its convalescence.

Rheumatic pleurisy is double, that is, it involves both sides before recovery sets in no tendency to fluid effusion, but an abundance of lymph is thrown out, the fever rarely over 100 and the course of the disease is long and tedious.

The characteristics of rheumatic pneumonia are its tendency to affect both sides before resolution sets in, resolution greatly delayed and when it does occur it is by lysis, entire absence of expectoration from the beginning, persistence of bronchial breathing and signs of consolidation even after the temperature has fallen, and tendency for articular manifestations to arise during and immediately after the pulmonary affection.

Pyemia and acute tuberculosis must be excluded in the diagnosis.

It is probable that many cases of so-called fibroid phthisis take their origin from this form of pneumonia, as the rheumatic poison produces an inflammation of the lungs with a tendency to organization rather than resolution.

Cornual Pregnancy.

Manierre, in the Milwaukee Medical Journal for January, reports a case of cornual pregnancy operated on for supposed ovarian cyst, the patient making a good recovery.

The rapid growth of the tumor, according to the patient's story, made the doctor exclude pregnancy.

The pregnant horn was removed, the placental tissue and fetus being delivered before the sac was turned out, which was then amputated well down to the internal os. The pedicle was broad and was tied off in 3 sections. The embryo was found to be female and 16 cm. in length.

In consequence of the rotation and displacement of the pregnant horn, the tube and ovary were found dislocated, being behind the gestation sac and near its upper and inner portion.

Complications, Accidents and Dangers in Connection with Fractures.

The first thing for consideration is that of self-protection, says Fuller, in the Kansas City Medical Record for January.

The surgeon may amputate with impunity and be praised for his skill, but if he attempts to save the limb he should look out for his reputation.

Constitutional conditions as syphilis or tuberculosis will interfere with the healing of a fracture.

Infection in compound fractures is one of the principal dangers.

Fat embolism may be the cause of a fatal termination.

The interposition of soft parts, mollities ossium and sarcoma may be associated with a fracture.

Tetanus, delirium tremens, pneumonia and gangrene in the aged are also to be watched for in some cases.

The Etiology and Prevention of Uterine Disease.

This interesting and important subject is discussed by Gill Wylie in the Medical News for February 3d.

Girls before puberty may have a vaginitis which is hard to cure unless we treat the clitoris by freeing it from its band by a very simple longitudinal incision.

Young girls are pushed too hard at school and do not have sufficient freedom out of doors, and so imperfect development of the generative organs is the result. Later on they marry and are sterile or conceive and receive a cervical tear at term which is followed by a train of evils.

Functional diseases of the ovaries are often due to imperfect development.

Don't take out the ovaries or the tubes in such cases.

Examination in young unmarried women should be made under general anesthesia, and prepare beforehand to do any simple operation that may be necessary, as curetting, removal of polypi, or freeing the head of the clitoris.

Every woman should be educated to properly regulate her bowels, though he admits that this is one of the most difficult things which gynecologists have to do.

Lacing is especially bad and girls should not wear corsets until they are fully developed, say at 18 or 20.

During menstruation if there is any pain, excessive flow, or dragging sensation, the girl should rest in bed.

Hot gin and other stimulants, and opium are to be condemned for pain during the period.

Medicines are bad, as they upset the digestion; better by far is freedom from enforced study or indoor life, and mental and emotional excitement with plenty of good wholesome food, out door life and diversion by contact with children as young or younger than themselves.

Abscess of the Lung Following Pneumonia.

A debilitated constitution, Bright's Disease, chronic alcoholism and diabetes mellitus are some of the predisposing causes which produce abscess of the lung after pneumonia, according to Reily, in the Memphis Medical Monthly for January.

He recommends the surgical treatment after the method of Murphy.

He reports a case in which the 5th and 6th ribs were resected in the axillary line and about a half pint of thick, foul-smelling pus removed.

The patient went into a state of collapse during the operation, but was brought around all right and made a good recovery. A second attack of pneumonia several months later resulted fatally.

Another case was opened between the ribs and half pint of foul-smelling pus evacuated. The cavity, the size of an orange, was scraped with the finger-nail, irrigated and packed and the wound healed promptly.

Under the microscope the pus and debris were found to contain elastic lung fibers, fatty crystals and the bacillus of Friedlander.

X-Ray Injury.

A case of severe X-ray injury is reported by Cassidy in the Medical Record for February 3d.

The patient was male, aged 40, and was exposed for 45 minutes, five inches from the tube which was of medium vacuum.

The current was generated by a static machine, the plates revolving 212 times to the minute. During the exposure there was not the slightest pain. A week later the surface began to itch and an acute dermatitis developed which at the end of the second week involved the lower third of both sides of the abdomen and upper third of both thighs.

The inflammation went on to the formation of vesicles, then bullæ and at the end of the third week the epidermis came away.

Under treatment the right side healed, and all of the left except a space the size of the hand in the groin which was covered with a tough yellowish membrane.

After trying various things the diseased tissue was removed with the knife, and later

skin grafting under which the patient made a good recovery.

The interesting points were, the fact that the patient during the time of exposure, although perfectly conscious, suffered no injury or pain. Eight days elapsed before the appearance of any injury, and then only a slight dermatitis. The rapidity of the changes in the tissue involved a truly mummified condition in which the lesion appeared dead, yet had sufficient vitality to be indestructible. To the touch the induration was hard and unyielding and not at all sensitive, but at certain points it would bleed on friction. The severe paroxysms of excruciating pain upon the application of any poultice or wet dressing, showing the induration to be highly absorbent. The marked constitutional symptoms and rapid wasting without much rise of temperature.

Some Dangers that Follow in the Wake of Modern Surgery.

The growth of specialism is one of the most important, according to Cowan in the International Journal of Surgery for February.

He admits that the specialist is a modern necessity, but not the young reckless kind that are so abundantly to be found in our cities.

He does not think much of operations done by the general practitioner, and suggests the complete separation of the physician and surgeon in any one man.

Very few men who try to practice both medicine and surgery can get a sufficient number of cases to operate on to keep their hand in.

The real surgeon should first, however, be a general practitioner, as such experience gives self-reliance, forces him to observe closely, and sends him to his books for counsel.

Too many men there are to-day whose only claim to the title of surgeon is ability and willingness to *carve*.

Inversion of the Uterus.

First, in the American Journal of Obstetrics for January, describes a new operation for persistent inversion of the uterus.

It is simply to cut the cervix in two in the median line, posteriorly, the incision being carried higher on the internal than on the external surface, the ring muscle being thus almost, if not completely, severed without opening the peritoneal cavity.

Comparatively light pressure with one finger tip will reinvert the uterus and the cut in the cervix is then joined with sutures.

Cervical Flexions.

Nearly every physician in active practice has seen quite a number of cases of dysmenorrhea, often associated with sterility, in married women.

In this condition Bell, in the *Annals of Gynecology and Pediatrics* for January, emphasizes the importance of paying strict attention to the cervix and the internal os. The normal direction of the cervix is towards the hollow of the sacrum and any divergence from this direction, the corpus being in proper position, means a flexion of the cervix itself.

Cervical anteversion he says is the most frequent cause of dysmenorrhea in young women.

Goodell's dilator he uses most frequently and he considers incision a questionable procedure in married women.

He reports three cases in which good results followed the proper treatment.

He concludes that cervical flexions do not command the attention which their importance demand, that they are often overlooked as being the cause of dysmenorrhea and sterility.

That anteversion of the uterine corpus is of very rare occurrence, and that this, as well as corporeal retroflexion, is a mechanical impossibility without prolapse.

That the first cause leading up to anteversion lies in faulty development, and that an elongated conical cervix always means faulty development.

That dysmenorrhea in unmarried and married women, with sterility in those who are married, should raise a suspicion of flexion at the internal os.

That as doctors, we should advise the correction of flexions in both married and unmarried women, at the earliest possible moment.

That the method of correcting them, whatever it may be, must be thorough.

Surgical Treatment of Aneurism of the Aorta.

The surgical measure that has shown the best result is that of the distal ligation of the artery, according to Rosenstein in the *Occidental Medical Times* for January.

We may ligate the carotid and subclavian simultaneously, or at two different periods. Of the simultaneous operation on the right side he finds 32 in literature, in which there were 14 cures and 5 improvements.

He quotes other statistics to show that the simultaneous operation is the best, and as with our present methods this is not such a dangerous procedure, we ought never hesitate to try it.

The Hydratic Treatment of Hyperchlorhydria.

Olsen in *Modern Medicine* for December reports a case of nervous hyperchlorhydria a man aged 26, treated by means of the hot and cold trunk pack in conjunction with other hydratic measures; the patient making a rapid recovery.

The following is an outline of the treatment:

Fomentations to the stomach and bowels with a hot foot bath, spray, and general faradization twice a week; electric-light bath two to five minutes, salt glow, and spray twice a week; hot and cold trunk pack, and cold friction sponge twice a week; mechanical Swedish movements, including vibration, kneading, friction, and percussive, half an hour daily; specially prescribed gymnastic exercises half an hour daily. His diet consisted of toasted breads, such as granose, zwieback, whole-wheat wafers, rolls, etc., with mild fruits, especially stewed California prunes and steamed figs, also especially prepared nut foods. Of the nut foods, malted nuts and protose gave excellent results in this case. An hour's moderate outdoor exercise was taken daily. At the end of two weeks the patient still complained of some epigastric pains, although not as severe as before. The bowels were now regular.

At this time the bath-room treatment was changed to the following: Hot and cold trunk pack, salt glow, and spray, three times a week; hot and cold trunk pack, hot and cold percussive douche to the spine, talcum powder rub, thrice a week. Within a week the gastralgia and flatulence disappeared, and the patient made a rapid recovery. The bowels were regular, and there was a marked gain in strength and weight.

In cases of hyperchlorhydria the writer has found the hot and cold trunk pack an excellent means of decreasing the amount of hydrochloric acid secreted.

Specific Treatment for Typhoid Fever.

A modified Bartholow treatment is used by Miller as reported in *Merk's Archives* for January, with the best results.

His prescription for adults is, tincture iodine 10 drops, carbolic acid 10 drops, distilled water and syrup, of each 2 ounces; a teaspoonful in a little cold water every 2 hours.

He says this treatment has been successful in his hands in every case for the past ten years, which embraced over 500 cases of typhoid fever.

Intra-Ocular Hemorrhage.

The significance of intra-ocular hemorrhage as to prognosis of life is discussed by Bull in the Medical Record for February 3rd.

This lesion is caused by certain diseased conditions of the blood and of the blood vessels, and so becomes indicative of the general condition of the patient so affected.

Hemorrhages into and beneath the conjunctiva are of little importance in the young, as they usually occur as a result of violent muscular effort, as in coughing or long-continued sneezing. The vessels in the conjunctiva, having little or no support in the loose connective tissue, readily give way to paroxysms of violent expiration. In the aged they occur spontaneously and point to a general weakened condition of the vascular walls.

Hemorrhages in the interior of the eye are always of prognostic significance. In senile angiosclerosis retinal hemorrhages are very frequent, and point significantly to the probable occurrence of cerebral apoplexy.

Recurrent retinal and subhyaloid hemorrhages in the young are of slight prognostic importance, especially if due to syphilis, whether inherited or acquired.

Hemorrhages into the vitreous in the young are of grave importance and point to the existence of general vascular degeneration.

In chronic interstitial nephritis and in diabetes retinal hemorrhages are of very grave prognostic significance, and independently of the presence of exudative retinitis point to a fatal termination of the disease. The mere presence of thrombosis of the central retinal vein with hemorrhage in the retina should arouse suspicion of the existence of albuminuria, and if this suspicion is confirmed by urinary analysis the prognosis in the case is more unfavorable than in those cases in which the hemorrhages do not exist.

Mastoiditis.

Collins, in the Laryngoscope for January, reports an interesting case of mastoid disease in a child fourteen months old operated on with immediate good effects, but eight weeks after the operation developed cerebral symptoms, and died in spite of proper treatment. Autopsy showed tubercle involving brain substance, pia mater, lungs, liver and spleen.

At the time of the first operation there was no reason to suspect a tubercular process, but it is likely that such was the case although there was severe pain.

Comparative Statistics in the Treatment of Appendicitis.

Cox, in the Medical Record for January 20th, shows some striking objections to statistics of the medical treatment of appendicitis.

Sahli's series is often quoted in which 6,740 were treated without operation with a mortality of 88, while 473 were operated on with a mortality of 21 per cent.

In the cases treated medically 20.8 per cent. relapsed.

In many cases the surgeon sees appendicitis after the medical treatment has failed and the patient is desperately ill, so in a number of instances where surgery fails to save we should mark down a failure for medicine, as it failed first. He reports several cases showing the dangerousness of medical treatment in some cases. A relapsing case under medical treatment with long intervals may be counted over and over again as a cure for the medical treatment.

The time will never come when all cases will be operated on nor is the time near when all may be treated medicinally, for many cases will get well without any treatment.

The truth about the medical treatment of appendicitis is that many of the cases that get well under it would get well without it. To be well of appendicitis under medical treatment is to be relieved, that is well symptomatically. To be well under the operative treatment means permanent relief.

Principles Relating to Static Machine Construction.

Wagner, in the Chicago Clinic for January, shows that a much better current for all purposes is secured by high speed. The mica plate machine can stand a speed of 2,000 revolutions per minute, and will generate a current of much greater volume than the same size glass plate apparatus.

These machines are best for X-ray work, as they can be run at such high speed.

X-ray burns are caused by a current generated in the tissues by induction from the tube and a high vibratory current will eliminate the inductive influences surrounding the tube.

Static electricity is coming more and more into general use, and the time is at hand when no up to date physician can afford to be without a static machine.

The increased demand has greatly decreased the cost, as they can be produced much cheaper in large quantities.

Blood Count in Diseases of Children.

A leucocyte count is valuable in certain diseases of children, according to Head in *Pediatrics* for February 1st.

Leucocytes are normally more numerous than in adults, as an infant will count 17 to 21 thousand, at 6 months 12, at one year 10, and at four years 9 thousand, after the sixth year it is practically that of the adult, 7,500.

The leucocytosis of digestion is greater in the child, as an increase of 5 thousand after a meal is not unusual, while in adults it is rarely ever more than 3 thousand.

Pyemic infection is usually followed by well marked leucocytosis, 20 thousand and upwards. So the count is valuable in otitis media, to determine whether suppuration has occurred or not, also in appendicitis for the same purpose.

In typhoid fever the count is valuable after the first week, as it is usually below the normal, and he considers the count more valuable than the Widal reaction.

In lobar pneumonia there is a very large leucocytosis. In meningitis, other than the tubercular form; in osteomyelitis and the acute exanthemata the count is valuable.

Fifteen cases are reported in which the count was used, proving a valuable aid in making the diagnosis.

Tubercle Germs and Giant Cells in Human Tissue.

According to the experiments of Bourland, in the *New York Medical Journal* for December 30th, the relationship between bacilli and giant cells is a variable one and not fixed by anything apparent in the light of our present knowledge.

Out of a number of examination the tubercle bacilli were found within giant cells in only four instances. Three of these examples of germ inclosure occurred in lung tissue and the fourth in the liver.

The sections were in paraffin and cut at ten microns, the bacilli being stained in section after the method of Schmorl.

Biliousness and Sea Air.

Those most likely to be made bilious by sea air are the gouty, fat and plethoric, and persons living a sedentary life, according to Weber, in *Treatment* for January 11th, or in other words, those who are predisposed to an attack.

So these people should choose an inland resort of medium or high altitude, though the drawbacks to the sea side may be obviated by careful dieting, suitable exercise and regulation of the bowels.

Intestinal Asepsis in Medicine and Surgery

A proper diet is most important according to Kellogg in the *Journal of the Mississippi State Medical Association* for February.

Attention to diet is a simpler and far more effective plan than the administration of drugs.

The proper diet must exclude cheese, flesh meats of all kinds, fish and shell fish.

The excessive use of fats and imperfectly cooked starchy foods are forbidden.

He thinks that the half-cooked oatmeal, cracked wheat and other so-called breakfast cereals are a prolific source of gastric disorder, as they hasten putrefactive processes in the alimentary canal.

A fruit diet is very serviceable, as fruit juices are unfavorable to the development of germs in the stomach.

He advises nuts as a substitute for meat, and all cereals must be well cooked.

In surgery he considers an unclean condition of the intestinal canal as the most important of all the causes of peritonitis.

Extensive peritonitis without stagnant fluids in the peritoneal cavity is an impossibility.

Beef teas and animal foods should be carefully avoided, as they afford the most favorable culture medium for the growth of the germs.

Fracture of the Pelvis with Rupture of the Urethra.

Bissell, in the *Archives of Pediatrics* for January, reports a case of a boy 9 years of age who was run over by a truck, fracturing the pubic arch and tearing the urethra completely across.

The perineum was freely opened allowing urine and blood to escape.

One week after the accident the urethra was stitched together over its upper surface, leaving an opening below and a plaster cast put over the pelvis.

Within a month the boy could walk about, had a small sinus in the perineum, but no urine came through.

The author thinks the good result due to the age and good health of the child; the early incision into the disorganized and infiltrated tissues; the short length of time between the injury and the operation; the perfect drainage and the fact that there was nothing more done than the simple incision and no attempt at extensive surgical interference in the primary operation; there was no wiring or nailing of the pelvic fracture, nor immediate suturing of the ends of the torn urethra.

Taking Cold.

A "cold," according to Woollen, in the New York Medical Journal for January 13th, is a derangement of the vasomotor nervous system and the nutritive process.

The attending phenomena are well known. Susceptibility, he says, is generally associated with a subnormal temperature or a condition of the system tending to a subnormal temperature predisposes to the susceptibility.

This condition is most generally found in catarrhal patients, as a temperature of 95 deg. may be found in such cases otherwise apparently well.

Children are not born with catarrhal disease, but catarrhal disease is of childhood genesis, as adults never contract idiopathic catarrhal disease. The child who passes into adolescence without the disease, and this is exceedingly rare, he considers safe for life.

The inability of the child to preserve the normal temperature is the beginning of taking "cold." Nasal stenosis, faulty hemastosis and body temperature are closely associated.

The practical deductions from the foregoing are the advisability of the control of the production of the unfit for life's vicissitudes; the more rational care of the newborn, the tender, and the immature; the proper care of the adult body, by the use of clothing that will conserve the body temperature against the ever-changing phases of climate and temperature; watchfulness against overheated houses; attention to the elimination of effete material from the body, by combating constipation, one of the curses of our civilization, and by other depurating processes; and the restoration of the nutritive processes of the system that hæmatosis and colorification may be sustained at the normal standard.

Surgery in Relation to Persons of Advanced Age.

Persons of 60 years or older are included in this class by Ward in the Western Medical Review for January 15th, and he says that they stand operations very well. They are the fittest on account of their survival and so they stand many operations well.

He reports three cases, a suprapubic cystotomy in a man aged 75, and two abdominal sections in women aged 75, in which the recoveries were rapid and uneventful.

We can add a colostomy in a man aged 74, and a herniotomy for strangulated femoral hernia in a woman, aged 63, with the same good results, and with no bad effects which could be attributed to age.

The Relative Intensity of the Second Sound at the Base of the Heart.

Creighton, in the Medical Record for January 13th, gives the result of a study of 1,000 cases.

The pulmonic sound was the louder in 291 cases, the aortic in 486 cases, and the two were of equal intensity in 223. The cases were from 10 to 29 years old.

She concludes that accentuation of the pulmonic second sound is almost invariably in young children and frequent in youth.

After the fortieth year of life, the reverse is the case, and it is then rare to find a pulmonic second sound as loud as the corresponding aortic sound.

Between the ages of twenty and thirty years there is no marked accentuation of either sound.

In view of the above facts, it is obvious that when one speaks of an accented pulmonic second sound as corroborative of a diagnosis of heart disease, such accentuation must mean an increase in the loudness of the sound over that normally to be expected at the age of the patient in question. A comparison with the aortic second is not sufficient to settle the question.

Further, when we speak of an aortic second sound as accented, we must mean (in case of a patient over forty years) more accented than it normally is. Once more, the simple comparison with the pulmonic second sound will not settle the question. The comparison must be with an ideal standard carried in the mind.

In interpreting the meaning of an accentuation of the pulmonic second in suspected mitral stenosis, one must bear in mind the age of the patient. The presence of a pathological accentuation of the sound can be determined only in relation to the degree of accentuation which is to be expected at the age of the patient in question.

Brain Tumor.

Smith in the Canadian Practitioner and Review for January reports a case of brain tumor in a man age 42 with no history of syphilis or other physical ailment. He was admitted to Insane Asylum for delusions of persecution.

After being in the Institution for seven years without illness he had a paralytic seizure from which he apparently recovered. Three years later he had a severe attack with paralysis of the left arm and leg which terminated fatally after some months.

Autopsy showed tumor involving greater part of right occipital lobe which on examin-

ation proved to be a glioma. Death was evidently due to coma in consequence of intracranial pressure.

The case lasted 4 years and two months from the first symptoms no convulsions, with abatement of all symptoms for a considerable period during which he worked regularly.

Microscopical Examination of Blood Stains in Medico-Legal Cases.

The two questions to be answered are, is the stain blood? If blood is it from an oviparous or mammalian animal?

In answering the first question we should look out for vegetable spores which may be in the suspected material or in the solvent used. Always examine the solvent before using it, says Wynn in the Medical and Surgical Monitor for January 15th.

The distinction between mammalian and oviparous blood is a simple matter, as in the latter we have the nuclei of the red corpuscles, their oval contour and larger diameter.

The common mammals that come nearest to man are divided into three groups. First, from 1-3382 to 1-3653, including the monkey, opossum, guinea pig, muskrat, dog and rabbit; second, from 1-4084 to 1-4372, including the raccoon, squirrel, ox, pig, horse and cat; third, from 1-4912 to 1-6189, including the sheep and goat.

So if the mean diameter is found to be 1-2500 the corpuscle cannot be human, or if the diameter is 1-5500 it cannot be human, as such shrinkage has never been known to occur.

We may be able to say positively that a given stain is not human blood, but we can not say that it is. We may say that it is consistent with human blood, but cannot claim more.

For preserving the corpuscles Hayem's solution used also in preserving fresh blood may be employed. The formula is as follows:

Corrosive sublimate,	4½ grains.
Chloride of sodium,	9 grains.
Sulphate of sodium,	45 grains.
Water,	4 ounces.

Another fragment of the clot may be placed in ¾ per cent. salt solution, or in Mueller's fluid, which is as follows:

Potassium bichromate,	2½ parts.
Sodium sulphate,	1 part.
Water,	100 parts.

The routine method with suspected blood stains submitted for microscopic examination is, first, if possible, to obtain a fragment of the clot. This is moistened with

distilled water and crushed under a cover-glass. With fresh clots this simple procedure will generally suffice. Under a one-fifth objective the coloring matter will be observed to slowly stain the liquid and the corpuscles gradually to appear, here and there, over the field. In older clots the end desired will not be so easily attained. More active solvents will be required. Virchow's solution, a 33 per cent. aqueous solution of caustic potash, acts quickly and powerfully. If corpuscles do not appear in a short time, it is scarcely worth while to persist with its use. A solution of concentrated glycerine and water (1 part in 7) diluted to the specific gravity of blood serum (1028) has the advantage of not drying so quickly as other solutions.

Epidemic Typhoid Fever.

In the Medical News for December 30th, Hubbard reports an epidemic of typhoid in Worthville, N. C., during 1898.

The water supply was derived from wells and they had been extremely low for the previous 18 months.

The infected well had five privies around it within 115 feet, the nearest being 80 feet.

Thirty-four cases of fever developed from it out of a population of 69, the death rate being 10 per cent.

Sixty-three cases occurred in the whole town, but in 31 the origin could not be traced, however 5 of the 31 drank water frequently from the infected well, and it is reasonable to infer that at least 40 cases originated from this single source of contagion. Eighteen of the 63 were under 12 years of age.

Gastric Ulcer.

Lund, in the Boston Medical and Surgical Journal for January 11th, reports a case of gastric ulcer, three-eighths of an inch in diameter, on the anterior surface of the stomach, three-fourths of an inch to the left of the pylorus. The ulcer was folded in at right angles to the axis of the stomach and held by three rows of Lembert sutures of fine silk.

Sixteen days after the operation rectal feeding was discontinued, and solid food was given one month after the operation. This was an unusual recovery, as the operation was done 16 hours after the perforation. He explains it by the fact that there was no solid contents in the stomach at the time, and the favorable location of the ulcer for suturing.

He believes in the injection of a saturated solution of Epsom salts directly into the bowels at the time of operation.

Alveolar Catarrh in Children.

Gittings and Judson, in *Pediatrics* for January 15th, report five cases of what they call alveolar catarrh in children.

They were all "walking" cases, the process being essentially subacute, running a course of from six to eight weeks.

These cases differed from tubercular infection by the absence of hemoptysis, night sweats and marked wasting, and by their ultimate recovery within a short time.

They emphasize the fact that the clinical signs of this condition may be easily overlooked unless careful exploration of the lungs is made in every case.

According to Powell "the inflammatory process in alveolar catarrh begins as a proliferation of the alveolar epithelium. In the mildest cases the inflammatory products may be expectorated, leaving the alveolar walls undamaged; where the degree of inflammation is greater the proliferated epithelium and the leucocytes are sufficient to completely block the alveoli. The exudate undergoes degeneration and may be partially absorbed or partially expectorated, but the alveolar walls have been damaged and permanent local collapse results from their agglutination. More commonly the cellular products become inspissated and remain for a long time in a cheesy condition, or subsequently become cretaceous. In the severest cases the fibrous stroma is involved, resulting in hyperplasia and ultimately in fibrosis of the affected area."

They conclude that alveolar catarrh may originate and run its course without the agency of the tubercle bacillus, but that the lesion resulting from alveolar catarrh may offer a suitable nidus for the growth of the tubercle bacilli.

Tumor of the Medulla and Pons.

Gray, in the *Journal of Laryngology* for January, reports a case of tumor of the medulla and pons which produced deafness.

The patient was a male, age 22, and had been sick for two weeks on admission.

He complained of difficulty of swallowing, giddiness of a month's duration, "paralysis of the face."

He died 17 days after admission and on autopsy a lesion was found involving the left half of the medulla and floor of the fourth ventricle.

The deafness was brought about by the destruction of the auditory nuclei and the fibres of the nerve within the medulla and pons.

The paralysis of motion was on the same side as the lesion and of sensation on the opposite side.

Poliomyelitis Anterior Acuta.

In making a diagnosis the following points are valuable, age of the patient, the average being two years, abrupt onset and rapid extreme paralysis, tendency to improve, bladder and rectal symptoms wanting, absence of anæsthesia, pain and rigidity in the affected limbs, electrical reaction in muscles, and the limbs arrested in their growth, says Mason in the *Medical Age* for January 10th.

His treatment is antipyretics if the fever be high, ice for local pains, salicylates if any rheumatic tendency and in such cases warm applications and fomentations, leeches or cupping, brisk purgative in the beginning, diuretics, counter irritation to the spine, tincture of aconite, ergot and belladonna, iodide of potash. In long standing cases he recommends phosphorus, strychnine, iron, arsenic, cod-liver oil and physotigima.

Electricity is beneficial in many cases.

He reports five cases that have come under his observation in four years, all living within a radius of five miles.

Tuberculosis of the Esophagus.

Bartlett, in the *Medical Review*, for January 20th, reports two cases of the very rare condition with autopsies.

The first case was in a negro aged 30, in fairly good condition, the esophagus presenting 5 fistulous openings in its anterior wall leading into cavities within as many different peribronchial and posterior mediastinal lymphatic nodes. No bacilli are mentioned, but the diagnosis was made from the apparent age of the different lesions and from the fact that the patient had been rapidly declining for a few months only.

The second case was also in a negro in which there was one fistulous opening on the anterior wall of the esophagus and from it a sinus lead upward and forward to a softened caseous lymph node situated just behind the bifurcation of the trachea.

Sarcoma.

In the *Eclectic Medical Journal* for February Russell reports two cases of sarcoma of the femur in which he operated with good results.

In the second case a stump was left for artificial limb, though at some risk to patient, but he would disarticulate by linear incision at the first sign of recurrence.

The X-ray was used in the diagnosis and showed in one case the serrated edges of the bony tissue protruding into the soft tissue.

Vaginal Section.

Palmer, in the Cincinnati Lancet-Clinic for January 20th, says that vaginal section may be substituted for abdominal section for diagnosis and treatment. The posterior incision is easiest and safest.

Pelvic abscesses low down, some cases of ectopic gestation, retroversion with fixation and prolapse of ovary and in certain critically low states of the system from pelvic disease may be treated by vaginal section.

Well defined cases of pyosalpinx, ovarian abscess, ovarian cysts, fibroids, are best managed by the abdominal route.

The abdominal section of all routes renders the uterus and its adnexa most accessible.

Vaginal section, anterior, posterior or both are preliminary steps to complete hysterectomy.

Much conservative, and some radical, surgical treatment can be well done by the vaginal route.

He closes by suggesting that in all cases of a proposed abdominal section, for female pelvic disease, ask whether the vaginal method will not answer.

Appendicitis Again.

The treatment of appendicitis is still being knocked about from one side to the other. Witherbee, in the Southern California Practitioner for December, makes a plea for the early radical treatment.

He only asks that reasonable concessions be made on both sides. The surgeon should not insist on making an exploratory incision for every case of stomach ache, nor should the medical practitioner expect to waste precious time by trying some favorite concoction for gangrene of an extremity.

The success of the surgical treatment depends upon its early beginning, and bears the same relation to this disease as the use of antitoxin does to diphtheria.

Recent Advances in the Study of Tuberculosis.

According to Stokes, in the Maryland Medical Journal for January, cases of hereditary transmission are rare, but the special susceptibility of the tissues can be inherited.

The inhalation of infected air as a causal factor has proper scientific support.

Experiments with antituberculous serum has achieved some good results, though it leaves much to be desired.

The sanatorium treatment received hearty endorsement at the Berlin Congress. This is simply dietetic and hygienic. The campaign of popular education is the secret of a successful fight against this disease.

Conservative Surgery of the Ovary.

Duemling, in the Fort Wayne Medical Journal-Magazine is a strong believer in the conservative treatment of disease of the ovary.

He says it should not be removed for ovarian adhesion, multiple Graafian cysts, cysts of the corpus luteum, ovarian cystoma, (with certain restrictions) or parovarian cyst. His position is defined as follows:

Conservatism is the attitude of true surgery.

The uterus, tubes and ovaries are of paramount importance in preserving the physical equilibrium of the female economy.

The disease of only a part of one of these organs, except in the presence of malignancy, does not warrant the removal of such diseased organ in its entirety.

Inflammatory disease of the pelvic organs or their peritoneum does not *per se* preclude the possibility of their functional recovery.

The intrinsic value of the female generative organs forbids their removal en masse for disease of one part only, except in case of malignancy.

Asthenopia.

Carr, in the St. Louis Clinique for January, reports a case of error of refraction complicated with marked esophoria producing persistent asthenopia.

As the patient could not give up his work (railroad car-clerk) he was given a pair of lenses plus $\frac{3}{4}$ D S ground on prism No. 2 deg. base out to be worn all the time when not at work. For use at work he was given a pair of plus 3 D S ground on a No. 4 deg. prism, with base in for each eye, arranged in pulpit eyes, so that to look at a distance he can easily look over them.

A graduated tenotomy might have to be resorted to later, but the glasses seemed to fulfill every indication, and if properly used he can pursue his occupation with comfort and his muscular vigor will return.

Submucous Myoma.

Hunter Robb, in the Cleveland Journal of Medicine for December, reports a case of submucous myoma of a year's duration completely filling the vagina in a negress, age 38.

The growth was removed by an ecraseur, but with difficulty, even after division of the pedicle, as it was as large as a child's head at term.

On microscopic examination it was found to be a fibromyoma of the uterus with inflammatory changes in the periphery and areas of degeneration.

The Diagnosis of Initial Stages of Pulmonary Tuberculosis.

Cochrane in the Journal of Tuberculosis for January recognizes three general routes which are self explanatory and significant of the routes by which the bacilli gain entrance to the pulmonary tissues they are Bronchogenic, Hematogenic and Lymphogenic. A respiratory murmur of lowered intensity, anorexia, slight increase in pulse rate and temperature, the peculiar pallor, night sweats, slight hacking cough, pleuritic pains chilly sensations, fleeting pains, glistening eyes, hectic flush and peculiar mobility of the ala of the nose are mentioned as the most frequently occurring physical signs and symptoms.

Tuberculin is useful as a test in the early stages. Later the presence of the bacilli in the sputum simplifies the diagnosis greatly.

The X rays are valuable as corroborative diagnostic measures.

Physical examination should be made by making use of the advantages of removing all clothing to the waist for any accuracy in auscultation or percussion.

The use of the percussion hammer with a finger as a pleximeter in detecting areas of slight thickening.

The advantage of "open mouth" breathing during auscultation or percussion.

The advantage of forced inspiration and expiration during the examination of suspicious areas.

The absolute necessity, for the evidence afforded, of examination of the sputum of all suspected cases.

The employment of the "tuberculin test" in suspicious cases of very recent development, in which only indefinite conclusions can be reached by other methods of diagnosis.

Conservatism in Surgery.

Operative procedure for the cure of appendicitis is almost wholly uncalled for in 99 in every 100, says Thompson in the Railway Surgeon for January 9th, nearly every case of appendicitis will recover if treated by a large antiseptic flushing of the intestines two or three times daily, rest and supportive treatment.

Then the ovaries, he says, are taken out when there is no cause and the patient is rather made worse than better.

In injuries of the extremities he advises careful examination, cleansing and bichloride dressing and waiting. Conservatism has its place in this day of doing and doing but extreme conservatism is equally as dangerous to the patient's life as the most pronounced radicalism.

The Infection and Spread of Tuberculosis.

Jones in the Journal of Tuberculosis for January discusses some measures lessening the infection and spread of this disease.

First let the State Boards of Health warn the public of the dangers from the spread of infectious diseases.

Second let the Boards be given the authority and reasonable money appropriations to enforce just laws.

Legislatures should give them the necessary authority to apply the tuberculin test to animals.

Make a law to prevent importing into the State any cattle for dairy or breeding purposes until they have passed the tuberculin test.

Require by law the slaughter of all fat or beef cattle which are sold or used for food at a public abattoir, and under competent State inspection, both ante and post mortem, putting a tag on each carcass or quarter of carcass, setting forth the date of inspection and slaughter, the quantity of meat and the name and number of the licensed inspector. Said abattoir inspectors to be appointed and licensed by the State Boards of Health.

Laboratory Milk in Substitute Infant Feeding.

Starr, in the Archives of Pediatrics for January, gives a clinical study of laboratory milk for infant feeding.

With the care taken in the preparation of this milk it is theoretically a most perfect substitute for mother's milk, but this theory is not sustained by the clinical experience of Dr. Starr.

The satisfactory cases were only three in three years' study, the partially satisfactory numbered 16 and the unsatisfactory 35.

The unhealthy conditions occurring in the second class were pallid, dry skin, dry, lustreless hair; flabby, soft muscles; indifferent appetite; inactive—not decidedly constipated—bowels with clay-colored evacuations; light colored urine; listlessness and disinclination to play; peevishness and restless sleep—in a word, the features of malnutrition.

In the third class of cases he had acute gastrointestinal catarrh and infantile scurvy.

However, he considers laboratory milk of great use in feeding infants from birth and may be advantageously employed in many cases to the end of the second month and is better at any age than the haphazard mixtures employed by careless and untrained mothers and nurses.

The Physiological Therapeutics of Reasoning in Madness.

Lindorme, in the Atlanta Journal-Record of Medicine for January, discusses the physiological therapeutics of reasoning madness, as physiology more than other branches of medicine can be called a science.

He does not lay all the burden on the nerve cell, but brings in the blood, that is the corpuscle, to share a major part. Personal relization is reserved to the red blood corpuscles. The trouble is in the blood and not in the brain.

The scoring of the data of sense-action is done by the nervous system, but the coloring is perpetuated in the red corpuscles of the blood.

It is along this line that asylums make use of the occupations which lead back to the more simpler thoughts.

The Inhaling of Hot Air and Flame.

Crile, in the Cincinnati Lancet Clinic for December 30, gives the result of some experimental research into the cause of the Phenomena attending the inhaling of hot air and flame.

Eight experiments were made on dogs under full anesthesia and they were killed before coming out.

The summary is as follows:

The experimental evidence at hand tends to show that the direct effects of flame inhaled into the lungs, with the upper air passages excluded, are not capable of causing sudden death. When the flame is inhaled through the mouth and upper air passage as well, a very marked reflex inhibitory action upon both the heart and the respiration is produced. In such a case, after a control has been taken (a control showing a characteristic inhibitory action upon the heart and respiration), when both vagi are severed, the inhibitory action upon the heart is wholly prevented, and, while the respirations are not so greatly altered in their character, they do not wholly escape reflex influence. The same may be said of similar experiments in which physiological doses of atropine has been given. The great irregularity of the blood-pressure curve shows that two factors are at work in its production, the one an accelerating, the other an inhibiting; and in the cases in which blast of hot air or flame was introduced through the mouth, both of these factors were brought simultaneously into play, while in the experiments in which the flame was forced into the lungs through the trachea, but one factor—the accelerating—

was active. In view of the fact that hot air and flame very markedly stimulate reflex inhibition of the heart and the respiration, it is quite probable that the sudden collapse from inhaling hot air or flame is due to the reflex inhibition of the cardiac and respiratory action, in the way just pointed out. Death may be caused in a few minutes by exhaustion of both the respiratory and the circulatory mechanisms from over-stimulation.

Mental Disease and Life Expectancy.

Moyer, in the Medical Review for January 6th, discusses the relation of mental disease and residence in an asylum or sanatorium to life expectancy.

The mere fact of having been a resident of such an institution is of no value in determining life expectancy, but the condition which sent a person to such an institution is of the greatest value.

The organic diseases bear the same relation as they do in persons who have not resided in such institutions.

The sanatorium habitues called neuropaths, hysterics, neurasthenics and hypochondriacs have their expectancy rather increased by living in a sanatorium, and in many of them it is greater than the life expectancy of the vigorous middle aged man who eats too much, works too hard, drinks a little and exposes himself.

The prognosis in mania and melancholia is generally good, though a small percentage die on their first attack.

Paretic dementia, however, is marked by some degree of rapidity and is almost certainly fatal. Delusion of grandeur, which is among the first signs of this condition, often causes the patient to apply for a large policy, and a careful examination is necessary to detect the beginning disease.

Pelvic Disease Following Parturition.

Genorrhoea is not always the cause of pelvic inflammation, but it sometimes comes through the open door of a lacerated cervix, says Stevens in the Cleveland Medical Gazette for December.

He reports a case in which the cervix was lacerated, the endometrium granular and bled to the touch, and in each ovarian region was an enlarged and tender immovable body. She was restored to fair health by repair of the cervix and curetting the uterus, though the uterus was still retroverted and the tubes and ovaries bound down by adhesions. The conservative took more time, but "you should never hurry unless you are really in haste."

Mastoid Disease.

Cole, in the Denver Medical Times for January, reports 16 cases of mastoid disease, 3 of which he trephined, used the mallet and chisel in eight, incised the tympanum before perforation in two, incised the periosteum without further surgical intervention in two, and maintained drainage already established through the ruptured membrane in one.

He considers mastoid cases as essentially surgical. The mastoid route is the natural one when the cells are involved and gives more effective drainage.

He emphasizes proper drainage when the mallet and chisel, gauge, drill or trephine have been used. At least two quarts of sterilized water or solution at 100 deg. F. should be used at moderate pressure at each sitting.

Periosteal incision is warranted before the stage of suppuration, especially in young subjects.

In extreme cases, where pus has invaded the cranial cavity, multiple openings in the skull with free incision of the dura is advisable.

Acquired Non-Malignant Stricture of the Rectum.

Bullard, in the Medical Record for January 13th, says that the majority of these strictures are not of syphilitic origin though syphilis may be a predisposing cause. He considers trauma the chief immediate causative factor.

Posterior proctotomy he thinks the most generally useful in the treatment of this condition. The after treatment is most important, as the wound must not be allowed to heal too rapidly, as the mucous membrane grows slowly, and the object is to allow the fresh surface to be covered over by the growing membrane.

Forcible division he condemns as dangerous and unsurgical.

If the local trouble is too far advanced for posterior proctotomy, the descending colon may be opened in the left inguinal or lumbar region which should give immediate relief to the sufferer.

Acute and Chronic Prostatitis.

Allison, in the Medical Monograph for November, divides the treatment of the acute form into early or palliative and late or radical. Under palliative measures he includes laxatives, rest, diuretics (pure water being the best), suppositories of opium and hyoscyamus, leeches and guaiacol externally.

After suppuration the favorite route (per rectum) should be selected.

In the chronic form palliative measures may be tried, such as regulation of the bowels, neutralizing the urine, aseptic catheterization, these failing we may do an internal prostatectomy, Bottini's galvanization, suprapubic cystotomy, perineal enucleation, castration, vasectomy or ligation of the internal iliac arteries, the latter only being mentioned to be condemned.

He says that in 60 to 80 per cent. castration is followed by good results.

On the whole, the treatment must be suited to the condition found in the individual, rather than to treat the disease in a routine manner.

The Care of the Recent Case of Insanity.

Burr, in the Medical and Surgical Monitor for December, says the object is to reduce excitement and strengthen self-control.

The patient should be placed in bed and cared for as if physically ill; 2 nurses, one for day and one for night, should be procured. Members of the family should be excluded from the room; delusions must not be met by the exercise of logic and argument.

The condition of the digestion and bowels should be looked after, calomel and laxatives useful, high enemata when the condition of the patient will permit.

Attention to the kidneys and bladder daily.

The application of cold; chloral the best sleep producer; tonics; the static electrical breeze, the salt glow, proper food, milk being the ideal; mechanical feeding if necessary, are valuable points in the treatment. Change of scene and travel he thinks has an extremely narrow range of utility.

Early hospitalization is urged and the profession should strive to overturn the old and absurd notions regarding insanity.

Methylene Blue as a Local Application.

Moir, in the American Practitioner and News for December 1st, recommends one to five per cent. solutions of methylene blue applied locally for diseases of the mucous membrane.

He reports three cases, two of tonsillitis and one of nasal catarrh and frontal headache, in which the methylene solution acted well.

He considers the pus-destroying properties of this solution equal if not superior to any drug we have.

Surfaces that we do not care to stain may be protected with oil or vaseline.

Alcohol In Its Relation to Mental Diseases and Crime.

Is there any causative or etiological relation between the extensive use of alcoholic drinks and the continued increase of epilepsy, imbecility, insanity, and criminality in all the countries of Europe and America?

This question is discussed by Davis in the *Southern Practitioner* for February.

He shows conclusively, by many examples, that alcoholic drinks are responsible for much of the crime and many of the diseases that afflict the people.

It is only by the marriage with total abstainers that the race of drinkers is perpetuated. If they were compelled to marry only among themselves, their part of the population would become extinct in one or two centuries.

The earth brings forth annually enough food and clothing to supply the necessities of the whole human family, and there are abundant facilities for their distribution if properly used; but so long as enough such food material is destroyed to make millions of barrels of alcoholic drinks, and billions of dollars are paid by those who consume it annually, so long will poverty, imbecility, insanity and crime increase. Nothing but the direct and indirect or hereditary, deceptive and perverting influence of the alcohol contained in beer, wine, whisky, brandy, rum and gin drunk by so large a part of the people could have so dulled the public conscience or perverted the sense or right and justice as to permit, and even to license for a pecuniary fee, the manufacture and sale of such liquors and at the same time multiply poor houses, asylums and prisons to accommodate the victims. When we add to the foregoing effects of alcohol the soothing, dulling, don't-care-ative effects of more than \$800,000,000 worth of tobacco used annually by the people of our own country, we have a rational explanation of the startling and otherwise inexplicable fact that throughout Christendom, at the end of the nineteenth century of the Christian era, aided by the most liberal systems of education that can be devised, mental degeneracy, poverty, vice and crime are increasing faster than the population.

If it be true that the constantly increasing consumption of alcohol and tobacco has been running parallel with the increase of poverty, imbecility, insanity and crime, in opposition to all the civilizing, educational and Christianizing influences of the nineteenth century, the only effectual remedies are total abstinence on the part of the

people and the placing of all liquids containing 2 per cent. or more of alcohol on the statutory list of poisons, to be sold only under the same regulations as arsenic, strychnia, morphine, prussic acid and other dangerous poisons.

Malarial Hemorrhagic Fever.

If we need quinine in any form of malarial fever, it is in the pernicious type of the disease; and the more promptly we give it the better the chances will be for recovery, says Stirling, in the *St. Louis Medical Era* for January.

To secure cinchonism as early as possible quinine should be given in large doses by the mouth or rectum, or the bisulphate hypodermatically as demanded by the urgency of the symptoms. His rule is to prevent the occurrence of another paroxysm.

Prompt purgation with calomel and soda, given in small doses, every hour, dry on tongue, until catharsis has been produced.

Hypodermic injection of morphine, when necessary, to allay the incessant vomiting and strychnia for the fagging heart.

We should see that the kidneys and skin are doing their work.

In the arrest of renal secretion, cupping over the lumbar region and diuretics, we have nothing better than bitartrate of potassium.

Special attention should be given to the patient's nutrition. From the fact that we have to deal with a case of blood poisoning, caused by the toxic effect of the malaria, makes it more important that we should see the patient is nourished.

Obstruction of the Nasal Duct.

Lund, in the *Southern California Practitioner* for January, says that it is only the very recent cases that can be relieved by such mild treatment as syringing and the application of antiseptic and astringent lotions. In the great majority of cases the stricture is more than a simple swelling of the mucous membrane, being in fact a true organic stricture and only amenable to surgical interference.

Dilation with probes is the best, being sure that they run up large enough.

Bowman's No. 6, is too small for the large size, as shown by the investigations of Theobald.

His probes range from $\frac{1}{4}$ to 4 millimetres, increasing regularly four to the millimetre.

He concludes that the treatment by the wearing of styles in the duct or the treatment by electrolysis are inferior to the treatment by probes.

Acute Broncho-Pneumonia in Infants.

This disease usually follows whooping cough, diphtheria or the exanthemata in children under four years of age according to Kyger in the Southern Medical Journal for January. Prophylaxis is, therefore, the first consideration in the treatment and to this end children should spend all the time possible in the open air. Cleanliness about the mouth is important.

Local applications to the chest, as flaxseed poultice mixed with mustard.

Water the best antipyretic.

Emetics and expectorants are not indicated.

The child should be nourished with easily digestible food, as raw meat juice, sweet whey or albumen.

Sweet milk is condemned, as children, on account of thirst, will overload the stomach and thus add to the fever. The dietetic management of all cases is very important.

The Therapeutics of Tuberculosis.

Flick, in the Therapeutic Gazette for January, considers the therapeutics of tuberculosis under three heads. *First*, as regards the predisposition, the resisting powers and the eccentricities of the patient; *second*, as regards the tubercle bacilli; *third*, against disease germs which set up mixed infection.

The first division is the key to the cure as the resisting power or immunity is the most important factor in the recovery.

Drugs which may be useful in building up resisting power for the patient by regulating the various organs of the body are: strychnine, digitalis, animal and vegetable digestive ferments, mercury, nitroglycerin, mineral and fruit acids, vegetable tonics, iron, bismuth, charcoal, and diffusible stimulants.

Against the bacilli we may use germicides or destroy the soil upon which the bacillus grows. The direct attack with germicides is not practicable, so our hope is by the indirect route by destroying the soil.

The most valuable drug in this connection is iodine, the nuclei and serums he has not had much experience with. The essential oils are promising.

Mendel's intertracheal injection consists of essence of thyme, 5 grammes; essence of eucalyptus, 5 grammes; essence of cinnamon, 5 grammes; sterilized olive oil, 100 cubic centimeters; iodoform, 5 grammes; bromoform, 5 grammes. Three cubic centimeters of this mixture is emptied at one time into the trachea.

Creosote is the best for mixed infection

in large well sustained doses. The best way to give it is in large draughts of hot water.

When finally the tuberculous subject drifts into a bedridden, helpless condition, exhausted with poisoning from parasitic life, it only remains to give him comfort and ease by the judicious use of opiates, antipyretics, and antisudorifics. Opium, phenacetine, atropine, and aromatic sulphuric acid are our chief resources.

In conclusion, it may not be out of place to say that what we need very much in the therapeutics of tuberculosis is more exact knowledge about the indications for the use of drugs. It is not enough to know that a certain drug is useful in the treatment of tuberculosis, but we should also know when and how to use it. If we paid less attention to the idea of specifics and more to the idea of adjuvants we would accomplish more in our struggle against this disease.

Blood Examination as an Aid to the Surgeon.

According to Levy, in the Medical Register for November, a blood examination is valuable in assisting in a differential diagnosis between suppurative appendicitis and the catarrhal form. A white cell count of 14,000 or more to the cubic millimeter means pus. A low count is usually indicative of a mild case, but it may accompany a fulminating one.

Where the number of leucocytes is near the dividing line the test is not of much value, but if above 14,000 we may safely say pus, if much below, no pus.

We must, of course, be careful to exclude pus formation in other parts of the body than that under consideration.

He mentions a case where a gum boil caused a leucocytosis of 27,000.

In disease of the spleen a blood examination may decide for or against a splenectomy.

While hematology is more valuable to the physician than to the surgeon, still its sphere of usefulness is destined to be immensely increased.

Submucous Fibroids of the Uterus.

Towslee, in the Woman's Medical Journal for January, reports two cases, in one the growth being removed piecemeal.

She advises packing the uterus with gauze after removal of the tumor if the bleeding amounts to much.

In the second case after tying the pedicle and removing the growth, she ran the curette gently over the endometrium, washed the cavity and packed with gauze.

Gonorrhea.

The Medical News for January 13th has the opening part of Neisser's article on gonorrhea, its dangers to Society.

The author first shows the widespread character of the disease in all civilized countries. 15.8 per cent. of the German army have gonorrhea, 32 per cent. of the Austrian, 21 per cent. of the Belgian, and 27 per cent. of the French.

Gonorrhea is a serious and often dangerous disease, because it does not remain limited to the primary focus of infection but progressively invades other parts.

Once the infection has gained a foothold in the uterine mucosa there is scarcely any medical treatment of any service.

The affection does not limit itself to the superficial mucous membrane, but through the toxic products produces effects at a distance from the original focus.

The gonococci may force their way into the connective tissue and find entrance into the lymph and blood currents producing arthritic affections, affection of glands and tendon sheaths, serious disease of the heart and blood vessels, and systemic intoxication. Gonorrhea may occur in the conjunctiva, rectum and mouth.

Purulent Pericarditis.

A case of pyopericardium following pleuropneumonia is reported by McConnell, in the Canada Medical Record for January, in which recovery followed a pericardiectomy.

A trocar was first introduced in the 5th left interspace $1\frac{3}{4}$ inches from the sternum 60 ounces of creamy pus was removed. Before the paracentesis the pulse was 132, respiration 28; after the operation the pulse was 92, respiration 32.

The diplococcus of Fraenkel was found in pure culture in the pus.

One week later pericardiectomy was performed under chloroform 2 and ether 1 not pushed to deep anesthesia.

An incision one inch long in the 5th interspace, its outer end extending to about 2 inches from the left edge of the sternum through which could be seen the distended pericardium which was incised and 66 ounces of pus escaped.

A portion of soft rubber catheter No. 12, was put in for drainage.

Three weeks later the tube was permanently removed and the patient recovered.

The pulse is 85, but the heart sounds are normal.

This is the 19th case reported and the seventh recovery.

A Type of Enteric Fever, Not Typhoid.

Lerch, in the New Orleans Medical and Surgical Journal for February, describes a case of continued fever which he thinks was not caused by the bacillus of typhoid, and so he calls it enteric fever. The patient died suddenly of heart failure and so come to autopsy when the intestinal lesions of typhoid were found.

He does not consider it typhoid, however, because the fever chart was not typical, the eruption was peculiar, tremor was not present, the diazo-reaction was absent and the blood count showed an enormous increase in the white corpuscles. On the other hand, he admits the typical lesions found on autopsy, positive widal reaction, enlarged spleen, congested liver, tenderness over the abdomen, dry and pointed tongue, typical facies, clouded sensorium and symptoms of infection and we think the presence of these outweigh the absence of the former.

The doctor has been too honest in his description to spring a new disease on us and we must consider the autopsy findings as a clincher in favor of typhoid.

Mild Types of Typhoid Fever.

Much of the typhoid of to-day is not the typhoid of Niemeyer, Trousseau, Watson, Wood and Flint, says Waters, in the Columbus Medical Journal for January 5th.

He takes exceptions to Osler's statement that any or all of the usual symptoms may be absent is to say that a well man may have typhoid fever.

He admits that one, two or three of the usual symptoms may be absent but not all.

He describes a case with prodromic period, fever, diarrhea and rose spots that was convalescent on the 10th day.

Other cases are reported in which the temperature fell to normal on the 12th day, and still these were undoubtedly cases of typhoid fever, if we are to believe the foremost medical men of the day.

He concludes that we have a decidedly modified type of typhoid fever or something entirely new.

Vaccination by Hypodermatic Injection.

The certainty of infection in some cases by vaccinating in the usual way led Hofman to try the injection of the virus with a hypodermic syringe.

In the Medical Register for December he reports the best results from this method in 50 cases.

Glycerinized vaccine lymph was used, the needle being introduced into the skin

and not under it and with the screw a small drop was injected. The arms were prepared with soap and water, then alcohol and ether. The needles as soon as used were put into a 10 per cent. carbolic acid solution and then kept in alcohol and ether until needed.

None of the cases were incapacitated for work, none had any inflammation extending in the subcutaneous tissue nor was there any sloughing or ulceration. All had an uneventful recovery within 3 to 4 weeks.

Acute Hemorrhage.

As it is often impossible to use solutions immediately into a vein, the cellular tissue or peritoneal sac, Kolipinski, in the Maryland Medical Journal for December 30th, recommends the simple expedient of drinking freely of water.

It must be given almost continuously until the bloodless victim begins to revive and react.

He reports a case in which 24 tumblers of water were taken by a girl of eighteen in a night. She had a severe hemorrhage on the twentieth day of typhoid fever.

She recovered under the water and cold poultices.

The Leading Editorials of the Month.

Bronzed Diabetes.

We are still in doubt as to the origin of diabetes, but the quest for information still goes on.

The scientific observers in this country are watchful of every point tending to throw light on the subject.

The Medical Age says that the bronzed cachexia of diabetes has long been known as a frequent clinical indication of that disease. The formation of the pigment has been a subject of much difference of opinion. The nature of this hemochromatosis has lately had renewed interest imparted to it by the presentation in this country of two cases of bronzed diabetes (*diabète bronzé*). One such case of this comparatively new and extraordinary disease has been reported by Dr. Osler, another by Dr. H. W. Berg, of New York.

French literature is somewhat fertile in reference to *diabète bronzé*. Hanot believed that the liver was the seat of the origin of the pigment. Letulle considered the liver stored but did not form the pigment, and regarded the accompanying cirrhosis as a secondary matter. Marie has suggested that *diabète bronzé* is not a pigmentary cirrhosis in diabetes at all, but a patholo-

gical entity, a new disease. The German investigators have usually regarded pathological pigmentation as a result of anemia. In cases of generalized pigmentation two substances have been isolated, one hemochromatin, containing iron, and one hemofuscin, which does not contain iron. In the general hemochromatosis of cirrhosis hemochromatin is the substance which gives the characteristic appearance.

The cirrhosis of bronzed diabetes is presumed to be the result of an irritant in the portal circulation. The bearing of this irritant upon the pathology of diabetes is as yet a matter to be determined. Some assume the condition one of general hemochromatosis and not one of diabetic origin. It is hoped that the complete study of the case now in charge of the staff of Johns Hopking Hospital will be the means of shedding much light upon the intrinsic origin of diabetes. This will be especially timely, as the etiology of this disease has been further obscured by the renunciation on the part of recent observers of the glyco-genic function of the liver.

Marriage and Certain Physical Defects.

It is sometimes a puzzling question that is presented to the physician, says the Medical News, when a patient or his friends consult him regarding the advisability of marriage with a person suffering from certain physical defects, and especially regarding the probability of the defects appearing in the next generation. The medical world is not definitely persuaded of the transmission of acquired characteristics. Even the question of heredity in family traits is not always clear.

A very interesting commentary on the questions thus brought up and one that throws light on the practical aspects of the subject is the book called "Marriages among the Deaf in America," by Edward Allen Fay, whose large experience among the deaf and his familiarity with all the aspects of questions relating to them makes him a reliable authority. Statistics show that about seven per cent. of the children born of parents one or both of whom were deaf, are congenitally deaf or become so at a comparatively early age. This is much more frequent than the occurrence of deafness among the general population of the country, so that evidently the physical defect in the parents stands as a determining influence in many cases. An analysis of the statistics shows how that influence is exerted. The marriage of congenitally deaf people who are blood relatives of near degree is especially fruitful in deaf children.

The marriages of individuals who have relatives that are deaf, especially when the deafness is congenital or acquired in early life, is much more liable to be followed by the birth of deaf children than if the parents represent isolated cases of deafness in their respective families. Acquirement of deafness when very young seems to be a hereditary trait in some families, and to be due to an irresistible condition of the tissues that make up the auditory apparatus.

The marriage of individuals who are deaf themselves, whether the defect is congenital or acquired, but who have no relatives who are deaf, is not liable to be followed by the birth of deaf children. It is to be noted, however, that the heredity of the defect need not be direct. For instance, the occurrence of deafness in a brother or sister or in an uncle or aunt may signalize the existence of a family strain or tendency to defective auditory development. The family tendency may skip a generation, too, and the occurrence of deafness may be an atavistic return to the grandparents' condition in the matter of audition. In a word, the carefully compiled and collated statistics confirm certain principles in the matter of conjugation that have been gaining ground of late years. It is not simple consanguinity in marriage that constitutes the danger to the offspring so much as consanguinity with like pathological tendencies. Isolated examples of defect even when congenital are not liable to be perpetuated, while the absence of defect in an individual whose family tendencies are in the line of defect may, nevertheless, result by atavism in defective offspring. It is family traits rather than individual peculiarities that constitute influence in heredity.

In Fear of the White Plague.

The constant dripping will wear away a stone, and the constant presence of a dread will sicken the bravest heart.

The Chicago Clinic has the following explanation of General Lawton's death:

The ordinary individual goes through life without giving much thought to that last tragedy, in which he must eventually play the leading part, which means his dissolution. And it is best thus. It is best that we do not anticipate the bell that rings down the curtain upon the play of life—best that a knowledge of the inevitable does not cast a shadow into the sunshine of our lives. We are not surprised when the Rider on the Pale Horse stops at our neighbor's door, but his visit to our own we are never anticipating. So that when he does stop and touch us with his lance, we feel the

same shock, as the sailor when the great ship strikes a sunken rock at sea. 'Tis a wreck at last.

Few men can bear, however, with stoicism a knowledge of the fact that the dread scourge consumption has fastened itself upon them. Anticipation of the long-drawn-out agony from which there is no respite; a death that comes by slow degrees; days and nights of distress and pain, with no hope of being able to fight the grim monster down, will cause the strongest face to blanch.

No better or braver soldier ever acknowledged allegiance to our country than General Lawton. A born warrior, he was brave even to recklessness. As a commander he was considerate of the welfare of his men, even while exacting from them the performance of the most arduous duties. At Santiago he acquitted himself with credit—the value of his services there being surpassed by no other. The extremely difficult and dangerous service he rendered the country, by running down and capturing Geronimo and his band of Apaches, has never been fully appreciated. That hazardous campaign in the lava beds of Arizona, against the most bloodthirsty and cunning of Indian foes, will ever attest the bravery, tenacity of purpose, and ability of General Lawton. But even the swarthy cheek of this indomitable soldier paled before a knowledge of the fact that he would soon fall a victim to tuberculosis. He preferred a soldier's death. Rendered reckless and desperate by reason of this fact, he threw aside all caution, and fell from an enemy's bullet, on the field of battle. He will be brought home and buried in Georgia, the State of his adoption. When the pomp and display of the soldier's burial is over, and the echo of the guns of the firing squad has died away, the night wind sighing through the branches of the Georgia pines will be a fitting requiem to him whose life was filled with war's alarms.

The Rules of the Game of Bullets.

The maxim that "all is fair in love and war" is no longer the code of lovers or of soldiers, says the Medical News. The rape of the Sabines, or Lochinvar's daring escapade is praised only in the light of the then existing status of woman. As in love, so in war, sentiments have changed. The torture of prisoners, the use of poisoned missiles, the betrayal of the enemy under a white flag—these things have all been crossed from the code of the fighting man. There has been a growing sense of the sacredness of human life, in both the military and civil forces of the world, and

a constant struggle has been going on between the desire to save life and the desire to kill. This explains certain grimly humorous inconsistencies in the game of bullets.

In order to carry long distances, bullets are made long and slim, with a conical point, steel or a composition equally hard being the material employed. As a bullet needs weight, it is usually made filled with lead. Such is the well-known Mauser bullet. Such a missile destroys a track through the body not much wider than its own diameter. Its capacity for destruction in this form is scarcely worth mentioning. File the steel from its tip, so as barely to expose the lead core, and when the bullet strikes it spreads and plows an ever-widening path through the body. Its track of destruction is then a slender cone, and the wound of exit is four or five times as wide as that of entrance. This bullet is called Mark II. If the lead core projects a fraction of an inch from the steel mantle, it is flattened as soon as it strikes the body. Driven through bones and soft tissues by the terrific impulse behind it, this flattened ball cuts a swath which would do credit to a good-sized fragment of a shell. This is the famous Dum-Dum. But the crowning glory of the bullet-maker is called Mark IV. Its lead core is exposed at the tip and besides a hole is bored from the conical tip right down to the center of the bullet. Thus aided in its expansion, Mark IV. can destroy a track through the body which measures ten inches across at the point of exit. If fired into a skull filled with plaster-of-Paris about to set, the whole skull will be scattered in pieces over the floor, as if it had exploded. Now, as to the English ethics of these bullets; Mark IV. for elephants and tigers, who carry no fire-arms; the Dum-Dum for natives with spears and arrows, and Mark II. for the Boers who, by the way, use Mausers.

England's use of expansile bullets has been severely criticised on the Continent on grounds which appear ludicrous to a man of peace. Why not take a ten-inch cone out of a man's back if you are trying to kill him? The sum of the matter is that humanity and war don't mix and a battle in which the soldiers are no longer able to take delight in the carnage is as poor fun as horse-racing without betting.

The Necessity of Maintaining Heat and Preserving Blood in Surgical Operations.

Many surgeons, or rather men who operate, are so much concerned about the omnipresent bug that they forget some other things

equally as important. And one of these is the temperature of the operating room. The Therapeutic Gazette at various times during the past eight years has published in its columns facts which call attention to the vital importance of preserving the body heat and preventing even slight losses of blood during the progress of mild or severe operative procedures. The original, editorial, and Progress columns have frequently brought before the attention of the practitioner the importance of these points in practice, and our attention has once more been called to it by the article upon "Surgery of the Extremities," which has been contributed by Dr. Joseph Bloodgood to the fourth volume of *Progressive Medicine* for 1899. In this article he details his own experience and that of his superior, Professor Halstead, of the Johns Hopkins Hospital, which show beyond doubt that if heat is carefully maintained and oozing hemorrhages prevented, the mortality from surgical shock falls almost to nothing. Thus, in cases of "Halstead's operation" for mammary cancer, in which extensive dissection of the tissues of the axilla is required, and which therefore sometimes takes three or four hours for its accomplishment, careful attention to these two points has prevented death from shock, although as a rule the patients operated upon have been women well advanced in years, whose constitutions have been to a considerable extent impaired prior to the operation. So, too, researches made by Crile, of Cleveland, upon surgical shock have emphasized these facts once more.

It is not sufficient for the surgeon to operate first, and then apply external heat to the body afterwards, nor to permit a considerable loss of blood by hemorrhage and then to replace it by the hypodermic or intravenous injection of saline solution. It is necessary for him to prevent the loss of heat and blood primarily by providing his patient with artificial heat during the operation, preventing undue exposure, particularly of important warm-blooded parts like the abdominal contents, and by checking of hemorrhagic oozing. If minute details in technique are carefully adhered to infinitely better results will undoubtedly be attained.

Settlement of the Roberts Case in Congress.

This case bothered the good people of the country a good deal. The Alabama Medical and Surgical Age advises the radical treatment in such cases, as follows:

It is not the object of these few lines to pass on the merits or demerits under the Constitution, but we think the best thing

that could be done with Roberts would be to castrate him and then let him serve his people if they desire him to do so. But when we see these good people—not only men, but women who are church people—religious people, married people—raising such a vigorous howl about Roberts, we wonder why they, with such little compunctions of conscience, tolerate other evils which are equally as debasing. Women of Boston and other cities will take the stand and write letters, and pass resolutions asking that this man Roberts be banished from the face of the earth, practically, and yet the destroyer of the unborn is tolerated and in many cases he is allowed to enter the best homes of the country, when he is known to be a frequent and unscrupulous user of the probe. Can it be that our American people do not understand the enormity of the crime of producing an abortion that they speak of it one to another, and of the doctor (?) who can perform the work with greatest dexterity. As we read the history of France and other countries, and are told that this business of the abortionist is becoming one of the greatest curses in America, we can but feel alarmed when we contemplate the fact that it is a growing evil, surrounded with so many obstacles to prevent its being suppressed. And we conclude—castrate Roberts, and the man who would produce a criminal abortion should be hanged.

A Set-Back for Osteopathy in Kentucky.

We heartily congratulate our Kentucky brethren on their business-like method of dealing with the osteopathic fraud. The Medical Record reviews the proceedings in full. It says that Kentucky, in striking contrast to some of the other States, has ever studied the best interests of the community at large, and of the medical profession in particular, in stoutly and persistently discountenancing the practice of osteopathy within its borders. Quite recently a decision has been rendered in the Jefferson circuit court of Kentucky which is probably the most discriminating and apposite of any that have yet been delivered in regard to osteopathy.

The judgment referred to was the result of a suit brought by a professor of osteopathy against the State board of health of Kentucky, to enjoin it from prosecuting him for practising osteopathy in the State. By the statutes of Kentucky the following regulations must be complied with in order to practise medicine:

this State. 2. A diploma from a reputable and legally chartered medical college of some other State or country, indorsed as such by the State board of health. 3. Satisfactory evidence from the person claiming the same that such person was reputably and honorably engaged in the practice of medicine in this State prior to February 23, 1884. 4. Satisfactory evidence from any person who was reputably and honorably engaged in practice of medicine in this State prior to February 23, 1884, who has passed a satisfactory practical examination before the said board."

The plaintiff in the case against the Kentucky State board of health did not possess the first, third, or fourth qualification named in the above-quoted regulations, but had received a diploma from the American School of Osteopathy at Kirksville, Mo., a legally chartered school under the laws of that State. Therefore, as by another section of the Kentucky statutes it has been enacted that there should be no discrimination against any institution, school, or system of medicine, the question to be decided was whether the American School of Osteopathy at Kirksville, Mo., was a reputable medical college. The State board of health fully investigated the said school. It sent a committee of three of its most prominent physicians to that institution, who after an exhaustive examination of its equipment and facilities for teaching, and after satisfying themselves as to whether its professors were competent or incompetent educators, came to the conclusion that the American School of Osteopathy at Kirksville was not a reputable medical college, and that consequently the diploma from it held by the plaintiff was entitled to no respect. That this decision was justified by the facts of the case was undoubtedly proved absolutely. Of the fifteen professors of the faculty only three were possessed of a degree in medicine, while the explanation of osteopathy given in the catalogue of the institution is a farrago of the greatest conceivable nonsense. The plaintiff had the unblushing assurance to testify that osteopathy cures all diseases except cancer, syphilis, and consumption: that he treats Bright's disease by manipulation, and diabetes by manipulation stimulating the renal splanchnic; that he treats diphtheria by manipulation, stimulating the vasomotor centre in the back of the neck, and by putting the finger down the throat of the patient, and manipulating the soft palate or fauces; that he treats scarlet fever, lockjaw, milk leg, varicose veins, dropsy, retention of urine, fistula in ano, anal fissure, acute rheumatism, hip-joint disease, simple, be-

"1. A diploma from a reputable medical college legally chartered under the laws of

nignant and malignant tumors, chronic syphilis, eczema, shingles, carbuncles, bone felons, bruises, puerperal convulsions, flooding after child-birth, laceration of the cornea of the eye, all by manipulation; but he refused to state how or in what manner this manipulation is applied. Many of the foremost physicians of Kentucky gave evidence for the defence, among whom was Dr. J. M. Mathews, the president of the American Medical Association, who testified that he understood the theory and practice of osteopathy, and that osteopathy is not a system for curing diseases, and is to be feared for dangerous results which would naturally be caused thereby. He furthermore stated that manipulation of the body, instead of being a cure for Bright's disease and diabetes, and for scarlet fever, appendicitis, retention of urine and other diseases which osteopaths aver could be cured by manipulation, would do the patient no good, but on the contrary positive harm. Dr. Mathews even went so far as to assert that osteopathy, upon the lines of the treatment laid down by the plaintiff, was as a system very foolish and and would be more likely to kill patients receiving it than benefit them. According to the testimony proffered in the foregoing trial, massage is the magical means by which osteopaths perform their vaunted cures. The fact that massage exerts a beneficial effect upon a certain class of maladies will be denied by no physician. But when its exponents claim that it will relieve and cure organic disease, it is time indeed that the gullible public should be defended against itself.

Perhaps even in the middle ages, before medicine was a science and quackery of every description was rampant, there has been a time when charlatans abounded and flourished as they flourish in this country now. Four or five States—in this enlightened age and in a land which proudly lays claim to possessing among its inhabitants the most acute brains to be found in the world—actually legalize osteopathy, while faith healers, Christian scientists, hypnotists, and many others of the irregular fraternity swarm at every corner. The action of Kentucky, in excluding from the practice of medicine all those who have not gained by a course of study and by practical experience the knowledge of how to treat the ills of their fellow-men, is just both to the general public and to the qualified medical practitioner, and it is a matter for deep regret that all the States of the Union do not follow its good example.

The Plague in Honolulu.

The danger point in regard to the plague is on our western coast and the men in charge need to stand on their guard.

The outlook, according to the New York Medical Journal, as regards the spread of the plague in Honolulu has grown rather more serious than it was a month ago. On December 22, 1899, Surgeon Carmichael, of the Marine-Hospital Service, reported to Surgeon-General Wyman that no fresh cases had occurred during the ten days ending on that date, and that the quarantine against the infected district and against outward bound interinsular vessels had been raised by the Hawaiian authorities.

He added that the Hawaiian board of health had acted promptly in the emergency. Four days later, however, on the 26th, he was obliged to report three supposed new cases, two in Chinamen who had been found dead and one in a young white girl who died after a brief illness that was not at first thought to be the plague.

It seems that when the quarter known as "Chinatown" was put through the cleansing process much of its refuse was dumped at a place called Iwelei, outside the city proper, but close to the slaughter houses and near the girl's home. The girl was found to have a punctured wound between two of her toes, which Dr. Carmichael remarks may have been sustained while she was going about barefooted or may have been a bite inflicted by some insect. In this case the symptoms and the post-mortem appearances were the same as those described in a previous report of Surgeon Carmichael's, and the microscopical examination showed the same bacillus as had been found in the earlier cases. At the date of the report the cultures were not ready for examination, but a number of rats inoculated had all died within sixteen hours. In the cases of the two Chinamen who were found dead there was, of course, no history of the illness, but post-mortem examination disclosed the same appearances as had previously been observed in plague cases, together with pneumonic areas. The femoral and retroperitoneal glands were enlarged, congested, and surrounded by hæmorrhagic infiltration, and the pleural, pericardial, and peritoneal sacs contained bloody serum, as had been noted in all the preceding cases.

At the date of his report Surgeon Carmichael was still convinced that the authorities of Hawaii would do everything in their power to stamp out the disease, but he found it a matter for regret that the facilities for the disinfection of baggage were quite inadequate. On January 9th Surgeon Kin-youn telegraphed that Surgeon Carmichael

had reported eight additional cases, but it does not clearly appear in Public Health Reports for January 12th, from which we derive our information, whether or not this number includes the three reported by him to the surgeon-general on December 26th. It is to be hoped that in the further work of sanitation it will be found feasible to burn refuse, instead of dumping it.

Further Prevention of Cruelty to Animals in the District of Columbia.

Eternal vigilance is the price of professional liberty.

The Kansas City Medical Record has the following pertinent words on Senate Bill No. 34:

The persistent and untiring Senator Gallinger has introduced into Congress a bill to prevent cruelty to animals in the District of Columbia. This meddlesome and overzealous senator has introduced the bill in the third succeeding session. The bill has previously been favorably considered by the committee. If it should pass it will be the beginning of a drag-net that would prohibit vivisection, if possible, in every State in the Union. The bill is a pernicious one and should be fought vigorously by every member of the medical profession, as it is intended to absolutely stop the experimental work of the Bureau of Animal Industry as well as the Army, Navy and Marine Hospital service. It is well known to every physician who is competent to practice medicine that there is no more humane work than to discover the means of prevention of disease which has heretofore ravaged our flocks of sheep and herds of horses, cattle, pigs and chickens. The prevention and care of diseases among domestic animals is well understood by everybody and needs no comment, but this bill also takes in the prevention of experimental research in the prevention and care of diseases among human beings. The cultivation of antitoxin to be used in the treatment of diphtheria and other contagious diseases must also suffer.

The bill now before the Senate is bill No. 34, and in communicating with our representatives of the Senate and Congress as well protesting against the passage of this villainous measure, we should not fail to mention the number of the Senate bill and ask our senators and representatives to bury it so deep that it never will be resurrected again. It is especially desirable that all of the State, district and county societies pass resolutions at once to the end that this bill be defeated, and have such resolutions

immediately sent to all of the representatives of the States.

We should also act individually in this matter. Each and every one of us knows some senator or representatives personally, and should communicate with them at once.

Immobilization in Diseases of the Joints.

Hilton's Rest and Pain will likely turn on the shelf when it sees the following from Pediatrics for January 15th.

In reviewing the reports of the French Congress of Surgery held in October last (*Revue Medicale*, 1899, p. 464), nothing is perhaps more observable than the reaction expressed against long immobilization as a cure for articular tuberculosis. M. Calot expresses the opinion that in a great majority of cases a cure can be effected by antiseptic injections (iodoform, guaiacol, creosote), followed by a plaster-cast for a few weeks only. He then removes the cast, and keeping the patient still in bed begins a daily series of careful passive gymnastics. If deformity is not present he even deprecates injection and recommends simple rest in bed with no instrumental constraint whatever of the affected limb. M. Lucas-Championiere emphasizes the fact repeatedly in an extended and interesting discourse that long fixation is just as injurious to a diseased as to a healthy limb, and that as soon as possible after injection or operation movements of small amplitude should be systematically practised. All the speakers agree that by this method ankylosis can undoubtedly, in a great majority of cases, be successfully avoided.

Are There Limitations to the Surgeons' Responsibility?

An interesting medicolegal point is to be raised in the courts of Columbus by a damage suit against Dr. J. F. Baldwin for alleged negligence in a case of abdominal section in which death is said to have resulted from leaving a sponge in the peritoneal cavity, says the Cleveland Journal of Medicine. The prosecution alleges that a surgeon is responsible for his own acts and also for those of all his assistants. The defense hope to show that surgeons by the complicated and rapid nature of their work are compelled to trust the counting of sponges and other accessory details of operation to various subordinates, and that in the very nature of the case it is impossible for surgeons to exercise personal supervision over all the details of their work. The defense will also introduce testimony to es-

establish the fact that in the instance in point the patient's friends arranged with the hospital in regard to securing nurses and the usual hospital service, and afterwards sent for the surgeon to consult him in regard to the operation. The rules of this hospital are said to provide that no surgeon may bring in an outside nurse, but must employ those attached to the hospital. The surgeon will produce affidavits to show that he, before the operation, assigned to the head nurse of the hospital, who assisted him in the operation, the duty of counting the sponges and relied upon her statement at the close of the operation that all the sponges used had been accounted for. He proposes to maintain that in view of these facts he cannot be held responsible in damages for mistake made by the nurse.

This raises the general question as to whether the surgeon is to be held responsible for the acts of his assistants, his anesthetizer and his nurses.

As a parallel case it is well recognized that when a physician correctly writes a prescription and directs it to be filled by a licensed and competent pharmacist, he is not legally responsible for an error upon the part of the druggist. This shows that pharmacy is a profession distinct from though allied with, medicine, and one having its own peculiar training and responsibilities which the physician is not called upon to share so long as he does not send his patients for medicine to a druggist who is not legally qualified. It seems reasonable, then, to maintain that when the surgeon employs as his assistants and anesthetizer properly registered and competent physicians, he has done all that the law should ask and that he should not be held financially responsible for errors made by them. In some malpractice cases in this State suit has been brought against the surgeon and anesthetizer jointly, which would go to show that the lawyers did not think it safe to place the sole responsibility on the surgeon. Thus far no case is known in which the exact point in which the limit of the surgeon's liability has been ruled on by the courts.

The profession of nursing is generally recognized as distinct from that of medicine and as requiring special training. Therefore it seems reasonable to maintain that when the surgeon has exercised reasonable diligence in securing a properly trained nurse—so essential to the safe performance of his own professional duties—he has met all reasonable requirements and should not in equity be held in any way responsible for acts of the nurse not done under his specific direction. It will be inter-

esting to see what view the courts will take of this matter and the decision will bear very directly upon the vital interests of the profession.

The Columbus case that is used as a text for these general remarks will not come to trial for some months yet, but it has already been pretty fully tried by both sides in the Columbus newspapers. While this has its objectionable features, it is perhaps, just as well that the public should have the opportunity to learn of the pitfalls that beset the path of the practitioner of medicine.

Bovine Tuberculosis and Man.

In this day of meat and milk inspection the following from the Western Medical Review for January is to the point:

Much discussion has lately occurred in regard to the relation of human and bovine tuberculosis. It has, until recently, been accepted without question that tuberculosis of cattle could be transmitted to the human being. Recent evidence that has come to hand and the opinions of several able and competent authors appear to throw doubt on this view of tuberculosis. The alarm that has been created in the human mind by the prevailing idea has become wide-spread, and measures have been taken by many State legislatures in the direction of stamping out tuberculosis among cattle. In some of the Eastern States we are under the impression that many cattle have been sacrificed and others placed in quarantine, and especially those belonging to the better herds. In the West the matter is being widely agitated. In Iowa, the coming session of the Legislature bids fair to see an effort made to limit the spread of bovine tuberculosis by legal enactment. In the New York Medical Journal there lately appeared an article by Edward Moore, a well-known veterinarian of Albany, that is deserving of especial notice. Dr. Moore states that there is an essential difference between tubercle bacilli of man and those of the ox. He quotes Theobald Smith, of the United States Department of Agriculture, as saying that "Human bacilli grow more vigorously from the start than do those from the bovine; that the length of the human bacillus is about three times that of the bovine in cultures; also other morphological and biological characters in which they differ. More convincing are the divergencies in their physiological effects, as shown by his experience, in which there was more rapid death of all guinea-pigs inoculated with bovine bacilli than those inoculated with human sputum. Experi-

ments on rabbits confirmed those of the guinea-pigs."

Moore finds clinical evidence in the every day lives of people who are constantly exposed to infection from bovine tuberculosis. In an extensive practice and with a personal acquaintance among hundreds of people exposed to an every-day infection with these germs he has failed to find a single case of tuberculosis in man contracted from cattle.

The Physician and the Surgical Consultant.

The physician and the surgeon are inseparably connected and their association should be both pleasant and profitable to all concerned, but we all know that at times it is otherwise.

According to the Boston Medical and Surgical Journal, sepsis and the numerous recent refinements in the operative technique have, as is well recognized, vastly broadened the field of surgery, and of legitimate surgery, to the great benefit of humanity. For this extension of the scope of surgical art, we have reason to be and are, no doubt, profoundly grateful, yet on careful review of the situation certain facts are observed which indicate that this expansion has brought with it a certain amount of harm as well as good. It is occasionally desirable and salutary to cease congratulating ourselves on the grandeur of modern progress in our art and to contemplate, for our better guidance and the possible benefit of our patients, some of the pitfalls into which the unwary surgeon and consultant may be led.

In the days when all surgical operations were attended with greater danger and suffering to the patient than they are at the present time, the surgeon was in every act and deed of his profession always under grave responsibility.

He was justified in operative interference and careful diagnosis and consideration of all the conditions surrounding the case. Under such circumstances the men who by force of personality and training were fitted to succeed in the profession of surgery were fewer in number than at present, and the question is worthy of consideration whether they were not, on the whole, men of better judgment.

In these days operative interference is so easy, that mistakes as a rule cost less. A legitimate advantage may be taken of this fact to take greater chances for a possibility of relief in serious conditions, and this advantage is taken daily by conscientious surgeons. There is, however, abundant evidence that this principle is carried too far, and that operations, particularly ex-

ploratory laparotomies, are undertaken with more prospect of settling a diagnosis than benefitting the patient, and often before more legitimate means of diagnosis, including especially those requiring careful observation of the patient over long periods of time, have been exhausted. "Exploratory laparotomy will settle the question so easily and quickly," says the enthusiastic surgeon, and "may afford a means of cure." It certainly may, but there are so many doubtful abdominal conditions which are benefited by exploratory laparotomy neither in regard to diagnosis nor treatment, that no conscientious surgeon will perform it till every other means of diagnosis has been exhausted. Exploratory laparotomy has its legitimate field, but should be limited to cases in which other methods of diagnosis have been tried, and in which some prospect, however slight, of subsequent advantage is presented.

Another occasional cause of unnecessary surgery is found in a wrong attitude of the surgical consultant toward the physician. The latter is too apt to call a surgeon to see a case, not to take charge of it, but to operate, he having himself assumed the responsibility of deciding upon operation, and told the patient and his friends that an operation ought to be performed.

The surgeon sometimes, it is to be feared, in his anxiety to agree with the physician who called him in consultation, may, even if in his own judgment the case is one in which a waiting policy would be better, delude himself into thinking that the physician has had better opportunities to observe the case, and operate against his own better judgment, with results not always for the best interest of the patient. Certain physicians, it is to be feared, would call a surgeon again in consultation who had done an unnecessary operation to the detriment of their patient rather than one who quietly but firmly refused to operate in contravention of their opinion previously expressed to the patient's friends.

If the profession can only remember that surgery is a specialty and that questions not merely of operative technique, but of diagnosis and treatment can be settled rightly only by men of experience in surgery, if they would call a consultant to decide upon operation, instead of taking themselves the responsibility of deciding questions the magnitude of which they do not realize, they would get results better for their patients and themselves, and not encourage the growth of a class of surgeons who are willing to act on the physician's opinion even at the expense of his patient, and incidentally to secure a grip on his consulta-

tion practice. This state of things is bad for the welfare of the patient, and art of surgery and the morals of every one concerned, and could be easily put an end to by the consultant's leaving to the surgeon the decision.

"Very true," says the physician, "but I don't want to subject my patient to the expense of a consultation unless the surgeon is going to do something. I can't call a surgeon every time there is merely a *question* of operation—I must decide myself." To such the answer must be made, that if he leaves the matter to his own judgment he will call the surgeon often too late to do any good in cases where his assistance has been urgently needed, as well as summon him at times to operate on cases which would better be let alone. It surely should strengthen the position of a physician in an enlightened community to be beforehand in calling assistance in the settlement of difficult surgical questions, rather than to settle them himself and then call a surgeon who will support him in his mistakes if necessary. Absolute honesty toward his patient's interest is all that is required on the part of the physician and the consulting surgeon.

The taking of responsibilities by members of the profession for which they are not fitted by training and experience is the bane of honest medical and surgical practice, and reacts in harm to the community and the medical profession.

Let responsibility be honestly placed and not wrongfully assumed in the relation of the physician and the consulting surgeon, and good surgery will be promoted at the expense of rash and careless work.

The War in South Africa.

It is safe to say that we know vastly more about South Africa than we did three months ago. The Canada Medical Record says aside from the general interest which we take from our British loyalty in the war now raging there, we have the special reason of being an active participant in it. For the first time in our history we have sent Canadian troops to assist the Mother Country. Their progress has been eagerly watched, and day by day the papers are searched to see if they have had their "baptism of fire."

Active hostilities, we know too well, mean death to some and wounds to others. But there is as a rule in all wars an enormous death rate due to sickness, most of it being caused by malaria. It is therefore a matter of interest to know the character of the climate where the war is now

raging. The climate of South Africa is, according to all writers, one of the healthiest in the world. So far the engagements which have been fought have resulted in the loss of a large number of lives, and rendered thousands non-effective from wounds. The general health of the troops has, upon the whole, been excellent, though at the time of writing we see reports of death due to enteric fever. Still, upon the whole, it would seem as if the present war might be largely free from that enormous death rate which so commonly has accompanied large armies in the field. This, if it turns out to be the case, may be attributed to the extremely healthy climate but also, we believe, to the great advance that has during the last twenty years been made in sanitary science.

As large numbers of the troops were immuned from enteric fever before leaving Britain and on the voyage out to the Cape, it will be an interesting fact to learn, as undoubtedly we will, how far the hypodermic injection of the anti-toxin has been successful. The configuration of South Africa plays an important part in making it a healthy country. It strongly resembles a series of steps. The Coast plateau is six hundred feet above sea level, the Southern Karoo is twelve hundred feet, and the Northern Karoo four thousand feet. That portion which borders on the coast is the least healthy for Europeans. In Cape Colony rain generally falls in the early winter. The first three months of the year are the hottest, but almost rainless. On the East Coast, where Durban is situated; rain generally falls in the summer. This is said to be the rule in the interior, where the winters are said to be clear and dry, with slight frost at night. There is a great contrast between the climate of the Southern Karoo and the Coast plateau.

In the former it is dry, with considerable variations in temperature. The mean maximum range of the thermometer is 87 F. in January and 36 F. in July. The Northern Karoo stretches to the Orange River, and has an extremely dry climate, the rain fall in some parts being only two weeks, and the general average about ten inches. "The Transvaal is an elevated plateau with a very healthy climate. Pretoria is at an elevation of forty-five hundred feet, and Johannesburg of five thousand feet above sea level. In spite of this elevation the summer heat in these places is very great, and dust storms are frequent."

As an evidence of its antagonism to epidemic disease, it is said to be one of the few portions of the world which never has had an invasion of the cholera or yellow

fever. It would seem, therefore, as if the present war might be free from epidemic enteric fever, dysentery and diarrhoea, which are truly called the scourge of armies. We need hardly point out how valuable this is to our forces, for it will largely confine the non-effectives to those who have unfortunately been wounded. Such a healthy climate will facilitate much to their recovery.

The Automobile from a Public Health Standpoint.

The day is not far distant when the automobile will be a very common vehicle.

The Medical Review for January 20th, says that the rather unsightly vehicles which have been invading our cities for the last year under the cumbersome and high-sounding title of automobile are evidently fraught with considerable advantage to the public health. Tentative efforts against their use have been taken by the authorities, but thus far the courts have decided that they are vehicles within the ordinary sense and probably not more dangerous than horse-propelled machines. Of course, their operation is attended with considerable danger at the outset, because of the inexperience of the drivers; but this danger will soon pass away and safety appliances will be devised so that accidents will be reduced to a minimum. Those vehicles which are propelled by electricity are very heavy, and, running as they do at considerable speed, they are quite dangerous to pedestrians. Their chief usefulness, from a public health standpoint, is their cleanliness. The bulk of street dirt is furnished by horses. In our American cities, where the cleaning departments are so woefully deficient, the removal of the chief source of dirt is a matter of the utmost importance. The cleansing of the atmosphere of particles of dust will lessen bronchial irritation and catarrhal troubles, to say nothing of the lessening of infection due to favorable soils produced by a dust laden atmosphere upon the air passages. Hence the possible value of the automobile in the prophylaxis of tuberculosis.

The Enactment of Better Medical Laws for the State of Missouri.

Missouri has been the birth place of some of the worst forms of quackery and charlatany under the sun.

Our sympathy is with the regular profession in that State, and we are glad to see an effort made to stop some of the disgraces.

The Inter-State Medical Journal says that a call for the organization of a "district medical society" was lately issued in this city, and as a result the "St. Louis District Medical Society" was organized at the Southern Hotel in this city, on December 19, 1899. It comprises representatives from St. Louis, and from the twenty outlying counties. A constitution was drafted by a committee of three, embodying briefly the object for the organization of this society. The objects of this body are the promotion of medical science and medical ethics; its other object is to *secure such legislation as will tend to extirpate all forms of quackery which now flourish in this State, under existing laws.*

The members present were very enthusiastic in their idea to secure better legislation, and we bespeak good results to follow from this nucleus. Each physician has a small circle of patients whom he can influence, and this is especially true of the country doctor. Therefore, if each doctor secures from the candidates for the State Legislature a written pledge that that candidate will support a bill looking for the abolition of quackery in all forms, particularly osteopathy and Christian Science, then will the practice of medicine be what it should be—*i. e.*, confined to those who have been trained for it, and not open to every charlatan who wishes to pose as a doctor, as the situation now is. The object of this association is a good one, and will surely redound creditably to its organizers and supporters.

On Cutting for Urethral Stricture.

Disappointing results are not uncommon after the usual treatment for stricture.

The International Journal of Surgery says that it is not always very easy to decide between the comparative merits in any particular case of urethrotomy as compared with dilation. Some surgeons have a rather marked preference for one of these measures over the other. In many cases it is left to the patient to decide which procedure he prefers to undergo. If urethrotomy is decided on, it is very necessary that the patient should be made to understand that the operation alone will not cure him, but that some passing of sounds will be necessary for a more or less extended period of time. If strictures are situated beyond the pendulous portion of the urethra, and are not very tight, we believe that dilatation is commonly indicated, because drainage beyond the pendulous portion, which extends about four and a half inches, is far more imperfect, since it takes

place in the direction of the bladder. In such cases, if we decide upon cutting, a perineal button-hole for drainage is usually advisable. Strictures in the pendulous portion are more easily cut, drain better, and therefore are often better treated by incision. Urethrotomy is often advised in patients who are too poor, too busy, or too careless to have dilatation properly performed, but in such cases the cutting operation often fails to give perfect results, because the incision alone does not suffice to obtain a perfect cure. The operation is indicated in these cases, however, and the patients should be warned of the necessity for after treatment. There is no doubt that deep seated strictures, beyond the pendulous part, are more elastic, as a rule, than those situated nearer the meatus, and afford the best results with dilatation. In such cases, especially if the patient is persevering enough, and intelligent and clean enough to be trusted to pass instruments upon himself, dilatation will often give the best results.

Therapeutic Researches.

Our need in this matter is very forcibly put in Merk's Archives for January. The knowledge we need concerning the nature of the various diseases and the true means of combating them can only be discovered in research laboratories. How many laboratories are there in America for the study of the effects of drugs in health and disease? Where are the physical and biological laboratories for the study of the fundamental laws of life? Professor Rowland answers these pertinent questions in the following words: "We see a few miserable structures here and there occupied by a few starving professors, who are nobly striving to do the best with the feeble means at their disposal. But where in the world is the institute of pure research in any department of science with an income of \$100,000,000 per year? Where can the discoverer in pure science earn more than the wages of a day laborer or cook? But \$100,000,000 per year is but the price of an army or of a navy designed to kill other people. Just think of it, that 1 per cent. of this sum seems to most people too great to save our children and descendants from misery and even death!" The public will tax themselves willingly to destroy life, but refuse to do anything towards saving life. Rich men spend fortunes to perpetuate their names in charities, in libraries, in monuments, in churches, and in colleges, but no one has thought far enough ahead to endow a therapeutic research laboratory. Legislatures vote the public funds in the

line in which bequests usually go, but the people continue to suffer, because of public parsimony in the matter of medical research. While the doctor is blamed for the loss of a loved child, sister, wife, brother, or friend, the finger of science points to the accusers and the facts all cry out against each of them: "Thou art the man!"

The people do not seem to be aware that they are neglecting their own interests in neglecting the interests of medical science; they seem to think that all possible knowledge is already in the hands of medical men, and if anything goes amiss it is the doctor's fault. If they could only be made to realize their own blameworthiness in not using their best efforts toward helping along medical research, what a blessing it would be both for them and the doctors! To-day the great bulk of therapeutic research is being conducted by private enterprise—not in publicly endowed laboratories. We wish to know what remedy or combination of remedies will give the best results in a given disease. Since the matter has never been put to the test of experiment, a query on the subject only elicits a babel of opinions. We wish to obtain the serial order of a number of remedies belonging to a common class, in order to discover the relative degrees of excellence of each in doing the work of that class. For reply we receive as many different arrangements as there are men consulted. We ask how drugs acts to produce the results we know they are capable of producing, and in the majority of instances but a theory is hazarded. The jungles of Africa, Asia and America remain unexplored, except in the most superficial manner for their probably innumerable healing alkaloids, glucosides, gums and oils.

Let us have a National Therapeutic Society to strive to control extensive research laboratories, where the true value of drugs shall be determined and the proper methods of curing disease made clear. Let the members of such a society work for the realization in therapeutics of what Prof. Rowland hopes for in each department of science—a large, well supported plan with numerous well-paid, thoroughly trained investigators. Let them develop a public sentiment that will eventually result in the liberal endowment of such institutions, and so shower untold blessings upon unborn generations.

Radium.

In this day of medical progress and advancement chemistry under the influence of her leaders keeps well up to the front.

New elements are rare and scarce and,

like the old doctors and the speculum, the old chemists did not leave many to be discovered.

The Inter-State Medical Journal describes *radium* as the last and the newest of recently discovered chemical elements. Whilst it has not shown any great virtue, yet still it is replete with predictions of great value on account of an invisible radiance which it gives forth, and which it is thought will furnish a more valuable, convenient and economical agent for surgical explorations than the Roentgen rays. M. and Mme. Curie began their investigation in 1898. By experimenting with pitchblende, the mineral from which uranium is obtained commercially, M. and Mme. Curie found that the former yielded the same effect much more conspicuously. This led them to suspect that they were on the track of a new element. They even went so far as to name it provisionally, although much difficulty was experienced in separating it from the substance with which it was associated. Just before the close of the year, with the co-operation of M. Bemont, they obtained indications of still another new element. The first they called 'polonium' and the second 'radium.' Polonium is believed to surpass uranium and its salts in emissive power five hundredfold, but Professor Barker estimates the efficiency of radium at one hundred times that of uranium. For this reason, and because of its comparative cheapness and simplicity, the second of the Curies' discoveries seems destined to replace the costly and complicated X-ray apparatus in the realm of surgery. One important distinction is to be noted between the behavior of the Crookes tube and that trait of radium which is now for the first time being exploited in this country. The practicability of deriving one form of energy—heat, light, electricity or chemical action—from some other has long been recognized, but it is axiomatic that none of them can be produced except by that method. It is believed that the most man can do is to transform. It is thought that he cannot, in any true sense, create. Roentgen obtained his X-rays only by a conversion of force previously existing in the form of electricity. But a radiance which will penetrate opaque bodies and act upon the chemicals on a photographic plate is secured from radium without the apparent use of any known species of energy. The phenomenon may yet be explained, but at present it looks very much like what has long been regarded an impossibility—the spontaneous generation of force.

The Role of the Thymus Gland.

The dark continent of medical knowledge is gradually being opened up and as we grow older we are growing wiser and, let us hope, better.

The Inter-State Medical Journal says, the thymus gland is an organ about which much has been written—mostly, however, in a speculative way. It is quite refreshing to occasionally hear that something definite has been arrived at in the direction of ascertaining its true function or functions, if it has any. From general work on this subject we can say that it is an organ which has double functions. It is a hematopoietic organ. It is a gland which has an internal secretion. This secretion has a considerable part to perform in the nutrition of the organism. If there is a pathologic insufficiency of this secretion, then we see inanition, cachexia, etc., in the subject. Again, we see a state of hyperthymisation which is pathologic. Like nearly all the other organs of the body, a normal equilibrium is what constitutes a condition of health and well-being; when the balance swerves one way or the other, we see disease.

Abdominal Hysterectomy.

A summary of an important contribution by M. Picord to *Le Nord Medical* on this subject, is made by *The Medical Times* and *Register* for January.

The author regards the abdominal route as preferable in the greater number of hysterectomies. One of its dominant features is that it leaves no pedicle to give trouble by bleeding, ulceration or mortification. Perfection of technique, operative education and moderate experience renders its performance from day to day more frequent.

There are things which give this procedure special advantages above all others. These are, first, the Trendelenburg position; second, the large retraction, and third, the traction on the uterus.

Wide opening of the wound in the Trendelenburg position leaves the pelvic organs clearly exposed to the eye. The intestines pressed well up and securely covered with pads leaves the pelvic contents independent and isolated. The degree of safe displacement or tension of the uterus upward by traction is of infinite value in abdominal surgery. Reverdi's pulleys first directed our attention to this feature of displacement in fibroid enucleation.

In fact, abdominal hysterectomy has become a simple procedure and those operations of a difficult character, calling for exception skill with special instruments are destined to disappear, not only because

they are unnecessary but because they swell the mortality.

It does not appear that the advocates of vaginal hysterectomy have proven their case, on the contrary, many of our most skilled operators are still the champions of the abdominal route. Longest in 1050 hysterectomies (abdominal) had a mortality of 4.50 per cent. The percentage of vaginal hysterectomies ending fatally yet remains at 5 per cent.

Vaginal hysterectomies must, however, remain for selected cases. M. Gross divides hysterectomies into many categories. Thus for simple extra-ligamentary the mortality was 4.25 per cent. For the extra-complicated 25. per cent. For the intra-ligamentary 42.85 per cent. With an obese woman having arterio-sclerosis, with frequent large losses of blood, suffering from a fibroid, no one would think of an abdominal operation; especially if she has borne children, and have a large spacious vagina.

M. Picard cites another example for the vaginal incision. Patient 35 years, had had two children. For several months had a large amount of hemorrhage with pain in the pelvis and general nervous disturbances, and though she had lost 35 pounds was still fat. She had sugar in the urine, was anæmic and addicted to morphine to relieve pain. The uterus enlarged above the pubis. He made a vaginal incision and removed both ovaries with uterus, in each of which was a large cyst. Another patient, 50 years, with tumor of the volume of a fetal head. She was in a state of great anæmia and emaciation and was reduced to little more than a breathing cadaver. She was a virgin with a narrow straight vagina, yet enucleation was not difficult, and recovery was prompt. Doyen advises the vaginal passage for hysterectomy in the obese. Ricard is in full accord but would include those who are in a reduced state of health and vigor. For moderate sized tumors not adherent the vaginal is to be preferred to the upper route. Ricard had 27 vaginal operations with only one death and this not imputable to the operation. He tells us that his vaginal hysterectomies were performed by a "debutant," a beginner, under difficult circumstances and yet with practically no mortality. In technique of operation he prefers Doyen's method; i. e., he begins by the retrograde method, strips the cervix, ligates the uterine arteries and turns the uterus out.

The American method is not without its advantages. It consists in commencing the dissection on one side, making a broad serous flap and securing the vessels. The

operation is completed by a subserous dissection.

The method of dissection in its essential details are not unlike that of amputating a breast, the ligation of vessels being among the last steps of the operation.

Note.—Frequent, rapid and safe uterine excision is a modern operation, now performed by any surgeon in selected cases with a low mortality. Its underlying principles are few and simple, viz., rapidity in manipulation, economy of blood, effective hemostasis, rigid asepsis, complete plastic patching, and, finally, proper after-treatment.

Patent Medicines and Preachers.

This subject has doubtless been considered by most of us and it seems strange that such opposite things should come so near together.

The American Practitioner and News for December gives some good advice to these good men.

There is no class of people in the world more easily imposed on than ministers of the gospel, and strange it is that this should be so, for they, above all other people, should at least understand the wickedness of the world, theoretically, if not practically, and know that the average manufacturer and vendor of patent medicines is nothing more nor less than a sordid "money-grabber," who cares for nothing but "filthy lucre." But that is not the worst of it; his nostrums often contain drugs that are injurious, and, in many instances, lead to excesses in opium. Thousands of innocent babies are dosed with soothing syrups, and doubtless many of them find untimely graves as the result of the injurious effects of opium.

Ministers ought to remember that their signatures should always appear in their official capacity. They are not intended to grace the pages of advertising sheets and daily newspapers, extolling the value of remedial agents about which they are absolutely ignorant. The position of a minister should place him beyond any thing to which the finger of suspicion might be pointed.

Notwithstanding the large number of Hypophosphites on the market, it is quite difficult to obtain a uniform and reliable syrup. "Robinson's" is a highly elegant preparation, and possesses an advantage over some others, in that it holds the various salts, including Iron, Quinine, Strychnine, etc., in perfect solution, and is not liable to the formation of fungous growths.

MISCELLANEOUS.

A Case of Bilharzia Hæmatobia.

The Bilharz Hæmatobia has often been described before, and is generally found in Africa, or in persons coming from there. The case reported is in a woman from Southern Illinois, she never having been out of the Mississippi Valley.

The patient was a slender, delicate woman about thirty years of age. She first came to me in 1897 for an ovarian tumor. After removing the cyst she was immediately relieved. She remained fairly well until early in 1898, when she began to suffer with pains in the region of the bladder. She also had hemorrhages at intervals, which her physician thought came from the bladder. She returned to me in September, 1899. By an examination the remaining ovary was found to be cystic, and it was removed at once. She convalesced from the operation without incident. She had had no flow of blood since the admission. Blood appeared in the urine in a few days. An examination of the urine showed a specific gravity of 1016, acid reaction, mucous and red blood cells, and some albumin. The albumin was present only when there was blood.

The pains in the bladder persisted. The urine was now drawn by catheter, which proved the source of the blood. The pains were worse in the evening, and the patient slept but little. Then came gushes of fluid from the bladder, some of which was caught in sterile pans. It was of pale color, specific gravity 1001-6, reaction neutral and containing but little urea. In this fluid were found the ova and embryo of the parasite. Those which were entangled in the sediment were closely observed. The most of the others moved very rapidly. Some of this fluid was drawn by catheter. It also contained the ova and embryo. The embryos were larger than the ova, varying from .1 to .12 m.m. long and about .05 m.m. wide. They showed all the characteristics as those described by Cobbald. The ova were from .08 to .1 m.m. long. Two small worms were found, which undoubtedly just hatched out.

Under anaesthesia the cystoscopic examination showed the mucous membrane of the bladder to be covered with circutrical patches irregular in size and shape. The ureteral orifices were elevated and could not be catheterized. Repeated examinations had been made for hydronephrosis, but at no time were there any symptoms, yet this fluid came at intervals and sometimes as much as a gallon at one time.

It now seemed apparent that there was a sac posterior to the peritoneum, back of the bladder.

The treatment consisted of santonin gr. v. three times a day, and bicarbonate of potash in large doses. The ova disappeared in a few weeks, after which the patient left the sanatorium, but since she has reported that there was some blood passed at times.

The parasites have been found in most parts of Africa, and Bilharz, Cobbald, Harley, Allen and others have written much about them. How the parasite gains entrance into the body is uncertain, but it is probably through the waters or vegetables, or in bathing. Boys who bathed in streams most frequently had it. It seems to effect the genito-urinary tract most frequently but has been found in the liver and portal vein. When in the genito-urinary tract, pain in the region of the bladder and blood in the urine are the most common symptoms, the presence of the parasite, embryo or ova completing the diagnosis.

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The Physician as a Business Man

As a general rule the busy physician is the poorest business man in the world. His mind is taken up with other higher things but a stern necessity is forcing the fact to his notice that he must take time to attend to the material side of his work. The Southern California Practitioner says that no other professional gentleman is compelled to assume as many responsibilities as the physician. Entrusted as he is with the lives of his patrons, he must at all times be prepared for any emergency that may arise. Others may be appalled or terror-stricken at some horrible accident, yet the physician must know no fear, be brave, yet tender, and equal to the occasion. The theologian, the lawyer, the statesman has time to prepare his work—the physician must always be ready.

The physician bears a double relation with every patient—the humanitarian combined with that of the scientist and that of the business man. I have often thought, considering the vast responsibilities heaped upon him, that the latter sphere, that of business man, is neglected to too great extent.

Physicians, as a rule, are poor business men, and it is often their own fault that they are not better off financially than they are. The irregular hours of sleep, and irregular meals, both of which tend to make the average life of the physician

shorter than that of any other professional man, are certainly deserving of better remuneration than the mere promise to pay. Their services are held too lightly; many people estimating the value of a physician by the fee he charges. Each practitioner must be his own judge as to the value of the services rendered; if he under-estimates them, he is alone to blame. The healing of the sick is your stock in trade, and you are doing your-self an injustice by ignoring the business portion of your profession. A physician who renders his patient the very best services at his command should never hesitate to demand that which justly belongs to him. Ignoring this simple business principle is the chief cause of the many failures in the practice of medicine.

The question naturally arises, how is this to be remedied and corrected? In the first place, make your charges commensurate with the service rendered; secondly, keep accurate accounts; thirdly, collect them systematically. There are many labor-saving ledgers on the market which make the keeping of accounts easy and up-to-date. Whether your business justifies the employment of a book-keeper or not, keep all accounts posted, so that they may be settled at a moment's notice. Render statements regularly; every three months, or what is preferable, every month.

This will not only remind your patrons that they are indebted to you, but shows them that you are a thorough business man as well as a good physician. In every other mercantile business, statements are rendered monthly, so why should not the physician do likewise? No sensible person would take offense at it, and those who do and raise a cry about being "dunned" are undesired patrons, and the sooner you weed them from your practice the better for you. The old fable of the husbandman who warmed the frozen serpent into life, only to be bitten by the venomous thing, often finds a counterpart in real life. This class of patients may call you "a good fellow" till you have cured them; when you attempt to collect, then——. Let your patrons know that payment is expected, that it is one of your business methods to demand it when due, and you will not be left in the lurch, even though your easy-going, generous hearted competitor across the way often is. The bright, capable, business man physician is the successful physician and he will get the patronage and practice. His professional success however depends upon his knowledge of medicine and the results he derives therefrom, for the public will stay with the one who gives the best satisfaction. His success

from a financial standpoint depends upon his ability to collect that which is rightfully due him.

The Surgery of the Stomach.

This progressive part of surgery is discussed by the International Medical Magazine, for January.

Our surgical friends on both sides of the ocean are making wonderful strides in the results obtained by them especially in operations upon the stomach. A little more than four years ago Prof. Ewald, of Berlin, remarked to the writer that to refer a case of gastric carcinoma to the surgeon was usually equivalent to signing the patient's death warrant. In the meantime the mortality from such operations has been extraordinarily reduced. According to the Vienna correspondent of the Medical Press, Prof. Maydl has recently published the results of twenty-five operations which he has performed for cancer of the stomach. He divides these into three classes for the sake of comparison. The first comprises cases in which the patient died from the effects of the operation, either directly or indirectly. These were four in number. The second group includes those dismissed from the hospital as cured, but in which within a short period thereafter a recurrence of the disease took place, and death ensued. These were seven in number. The third group, which is the most important, comprising fourteen cases, including those patients which still live. This section he divides into two sub-sections: (a) living upwards to two years since the operation, there being seven of these; (b) those alive less than two years after the operation.

Those placed in the second class include patients who left the hospital cured, but have since died from a recurrence of the disease. They lived variable periods from two to twenty months—an average of 11.3 months. Thus the operation was fatal in 16 per cent. only as against 73.3 per cent. a few years ago. In 28 per cent. there was a recurrence, but some prolongation of life; and 56 per cent. are still living. This is a triumph of which the abdominal surgeons may well be proud. We have not seen the most recent figures of such eminent American surgeons as McBurney, Montgomery, Gill Wylie, Price, Keen and Senn, but have no doubt that they would show an equal improvement.

Meanwhile, it is worthy of mention, with the same prominence, that the advance in the treatment of many serious gastric diseases by conservative, non-surgical

methods has been no less remarkable. By means of a skillful use of abdominal massage, intragastric electricity, gymnastic and other mechanical forms of treatment, with diet and some help from medicines, atonic dilatation and displacement of the stomach, constipation and other hitherto refractory affections have now become in most cases entirely curable. Even movable kidneys are often at least symptomatically cured by these means and sometimes fastened anew in their proper positions by strengthening their supporting ligaments as well as the abdominal walls, and resting the lost cushions of fat which under normal conditions assist greatly in retaining these organs *in situ*.

Racial Deterioration.

Perhaps on this subject more ink has been spilt than on any other of the burning sociological questions which our modern civilization has brought into prominence. The exodus of the population from the country to the towns is continuous and increasing yearly. This being so, it follows as a matter of course that the human race will to some extent lose those physical characteristics which distinguish the dwellers in the pure atmosphere of the country, and who still further harden their constitutions by manual labor in the outside air. In fact, the question as to what effectual means can be taken to render the life of the inhabitant of a large city more healthy, and to propagate a race better fitted to cope with the strain of modern existence, is one the importance of which looms up with growing significance day by day. The town life, and especially as spent by the working and poorer classes, is incompatible with good health is too notorious to need emphasis. But several facts that have been brought to the notice of the public recently have again engaged the attention of social reformers and further clinched the argument that the matter should be squarely faced and immediate steps taken to ameliorate the condition of that portion of the population which Mr. Stead has aptly termed "the submerged tenth."

It will doubtless be recollected by our readers that at the time of the outbreak of our war with Spain, and when patriotic citizens were rushing to enlist, a large proportion of these were disqualified by the examining physicians as physically unfit. The same thing is now occurring in Great Britain, and within recent years in that country the standard of would-be army recruits has had to be considerably lowered.

The measures suggested to counteract

this evident evil have been various. Among other Utopian and impossible remedies advanced by sociologists is that a large part of the poverty-stricken population of cities should be induced to revert to country life. This plan, however plausible it may look in print, will be found to present insurmountable difficulties and may be dismissed as illusory. What is really required is that the large centres of population should be placed in a satisfactory sanitary condition, and that the homes of the toilers should be made commodious and hygienic. The ill-ventilated rookeries that disgrace towns in all parts of the world should be swept away, and in their stead houses in which human beings can live and breathe, not merely exist, should be erected.

There is unfortunately, however, another and more hopeless class than the workers who must be considered. These are the so-called degenerates. This species may be said to swarm in all large towns. Mr. Arnold White contributed an article to the October number of the *National Review*, entitled the "Cult of Infirmary," in which he inveighed against the lax and infective methods of dealing with this description of individual. He said: "Of the London and New York unemployed, at least two out of every five are not only unemployed, but unworthy of help," and further suggested the following drastic means of ridding the community of these pests: "Extirpate them by immuring them for life, not because they are wicked, but because their stock is corrupt." Mr. White declares that the majority of these degenerates are brought to the pass in which they find themselves by their own vicious faults, and quotes the late Sir Andrew Clark as stating that 70 per cent. of the patients under treatment in the London Hospital, Whitechapel, owed their ill health to preventable causes. The article in the *National Review* reviews the situation in these outspoken words: "In our great cities no social stigma attaches to preventable ill health. Parental neglect, premature and reckless marriage, leading to the multiplication of tainted brains and rickety frames, are matters of no importance to practical politicians. Christian charity is invoked to canonize weakness, while preventable weakness is honored under the sacred principle of individual freedom. No law prevents the union of a consumptive swain with his strumous sweetheart; no restriction interferes with the colonization of our towns by diseased aliens; neither Church nor State debars peniless and undersized striplings from undertaking parental responsibilities."

Every word of this statement is true; but,

looking at the matter from the standpoint of sound common sense, an absolute cure for the existing state of affairs does not seem to come within the sphere of practical social reform. The evil may be scotched, but not altogether killed, and we shall doubtless have our degenerates and diseased with us so long as the world lasts. In the first place, we take it, something should be done for the deserving poor, and after that scheme has been brought to a more or less successful issue, we might turn our attention to the degenerates. However, this much may be said, that to the person who succeeds in even a slight degree in bettering the condition of our working classes and pauper population is due a greater triumph than is accorded to a victorious general or admiral. Probably the only true and effectual remedy lies in the education of the masses.—*Medical Record.*

Aneurysm of the Subclavian Artery and Its Treatment.

A. H. Barkley reports a case, in the *New York Medical Journal*, in which he did distal ligation.

He says that ligation of the second part of the subclavian artery is not so easy as one would think, the same portion being easier to tie on the right than on the left side; this difference is due, of course, to the anatomical relations on the respective sides. Ligation of arteries for aneurysm or other causes is not followed by the happiest results sometimes. Distal ligation for aneurysm is, I believe, not followed by such good results as proximal, but once in a while there is nothing left to do, as in the case I shall report later, but to place a ligation on the distal side of the aneurysm.

C. H., a man, aged forty-five, consulted me on November 13, 1899, complaining at the time of intense pain in the left side of the head and in the left arm, also of difficulty in breathing. The man appeared to be in good health, and said he felt well except for the pain.

On questioning him I found he had begun to complain of pain and difficulty in breathing about six weeks prior to his visit to me. He gave a specific history of twelve years' standing; no evidence of endarteritis could be detected.

On examination of the chest I noticed a fullness in the left supraclavicular space; no distinct tumor could be felt; the external jugular was very much engorged, showing some obstruction to the return of venous blood. He also perspired very freely on the left side of his face and neck. Auscultation did not disclose anything except in

the left sterno-clavicular region, where a bruit could be heard, which was systolic in time. A slight hypertrophy of the heart was present. The left radial pulse was of much smaller volume and slower than the right. The left vocal cord was paralyzed, causing a change in the voice.

After several methods of treatment had been thoroughly tried by other physicians and myself, I advised him to be operated upon; he consented. So, on November 16, 1899, he was sent to the hospital and prepared for operation on the following day. An incision was made half an inch above and parallel to the left clavicle, extending from the outer border of the sterno-mastoid muscle to the inner border of the trapezius; the skin was pulled down over the clavicle and cut, thus avoiding injury to the external jugular vein: the platysma and cervical fascia were divided on a grooved director; the sterno-mastoid was divided to its outer third in order to have more room; dissection was carried deeper until the outer third of the subclavian artery was exposed; this part not giving any trouble, the second part was exposed; the scalenus anticus muscle was now divided in its outer two-thirds, care being taken not to wound the phrenic nerve or internal jugular vein. The aneurysm was found in the first part of the artery. As it was impossible to ligate the artery on the cardiac side, a ligature of stout silk was passed from above downward and inward around the artery as near the junction of the first and second parts as possible. The wound was closed with cat-gut sutures without drainage.

He does not complain of any pain either in the side of the head or in the left arm. He is now able to be at work. The pressure on the recurrent laryngeal nerve is evidently much less, as his voice is much improved.

Acute Alcoholic Poisoning.

Dr. Baker of Worcester reports the following case: A man, twenty-five years of age, accustomed to moderate drinking, in apparent good health, entered a saloon and made a wager that he could drink a pint of whisky in ten minutes. One and a half pints of cheap whisky was brought to him, which he drank in less than five minutes, and started for home. Having several miles to go, he soon became unconscious, vomiting, and was comatose on his arrival. His face was livid, he breathed heavily, and after four or five convulsions, died in six hours from the time of using spirits. An autopsy was made thirty-six hours after death. The pupils were widely dilated

and unequal. There was much engorgement of the sinuses and the pia, the punctata cruenta were very prominent, and the whole brain was edematous. The lungs were distended and engorged, with their lower portions dotted with numerous pleural ecchymoses, such as seen in death from suffocation. There was nothing remarkable about the heart or the appearance of the blood. The stomach contained digested bits of food, and a dark liquid containing an alcoholic odor. A chemical examination of the contents of the stomach showed fourteen and a half cubic centimeters of absolute alcohol. The portion of the liver examined indicated an amount equal to three and a half cubic centimeters for the whole organ. This was pronounced a case of alcoholic poisoning.—*Quart. Journal of Inebriety.*

A Case of Neurosis of the Heart.

Abraham Galtman in the New York Medical Journal reports a case as follows:

Mary D., aged twenty-eight years, married, came to my office (November 12th) complaining of "her heart thumping" and "nervousness."

History.—She has had such attacks since her menses first appeared (fourteen years), becoming worse at each monthly period; they are aggravated by emotional disturbances, noises, frights, and the slightest reprimand from her husband. She has one child, aged three years. She states that her attacks of "heart trouble" have become more frequent since the birth of her child.

Family History.—Her mother and father are alive, also one brother. She says her mother was and is a very nervous woman, often requiring a physician to treat her "fits."

Physical Condition.—The patient is anæmic, but flushes at the least provocation. There is visible tremor of the hands and fingers. She is very emotional and nervous, and restless when sitting.

Her pulse is rapid and increases while noticed to 140 to 150. Temperature, 99 deg. F. Heart, nothing abnormal. The sounds are sharp; the second is somewhat accentuated. No murmurs.

Treatment.—Rest—as much as possible in the recumbent posture. Regular hours for eating, prohibiting alcohol, tea, and coffee. Sexual excitement must be avoided, a point which I impressed on her.

I saw her about three weeks later, and found the following signs of improvement: She was not so restless when sitting; the tremor of the hands was slight; anæmia was not marked; no flushing of the face

was noticed; she felt strong and less nervous; pulse was 100, full and regular; her temperature was 99 deg. F.; and her heart sounds were normal.

On December 18th she was still improving under the same treatment. Her pulse was 98 and her temperature 98.4 deg. F. She had avoided physical exertion and had rested as much as possible.

Of drugs, strychnine ranks as one of the best, in increasing doses, given in the form of tincture of nux vomica, fifteen to twenty drops, three times a day. Where sleeplessness occurs, bromide of potassium is of service. During an attack, cold applied over the heart may be tried.

President Kruger at a Banquet.

Towards the end of March, 1892, President Kruger came over from Pretoria to Johannesburg, and on the 25th of that month he was entertained at a banquet by the leading men of the town.

It was stipulated beforehand that, as his honor was not in the habit of dining at so late an hour as 7 o'clock, the dinner must be at 6, which, it was added, was a concession to the curious custom of the Uitlanders.

Punctually at the moment Paul Kruger arrived. He does not possess a dress-coat, but wore his usual rusty black frock-coat, crossed by the broad green ribbon of his office. His breast bore his orders and decorations, but the stars looked shabby, and would have been all the better for a little polishing up.

President Kruger duly sat down to the banquet, and a predikant, or clergyman, said a potently long grace. The President did not take soup, and drank no wine. He called for a big cup of coffee, and ate two plates of fish. Then the toast-master called for silence, and explained that his Honor had had enough, and wanted to go home.

Captain Von Drandis, a genial old German, the landdrost, or civil magistrate of Johannesburg, promptly got up and proposed the President's health. Kruger replied in a gruff, throaty, husky voice, and after talking almost unintelligible—of course in Dutch—for a few minutes, he reached under his chair for his battered old top-hat, put it on, and, nodding to the assembled guests, went away.

The rest of the dinner and speeches had to be got through without him, and after his departure an audible sigh of relief went round the hall, for he does not eat prettily, and his presence did not conduce to harmony or good-fellowship.—*Dietetic and Hygienic Gazette.*

The Doctor and His Collections.

In the race for ascendancy the commercial spirit of the age should prompt us to put aside old ways and customs, no matter how much honored by long time observance, which are impeding our progress day by day, and adapt ourselves to latter day methods, which will not only improve the material aspects of our business methods, but which elevates and ennobles our profession. This subject demands concerted action on the part of the whole profession. It means a long, hard fight. The tendency is always for things to grow worse, rather than better, and there is no more favorable time to meet the issue than at present.

There is no doubt that whatever evils exist are largely of the doctor's own making. In the outset we referred to the commercial spirit of the age. The inference must not be drawn that we advocate practice of medicine solely for the "loaves and fishes," and yet, we do intimate that *sentiment* will not keep the *wolf* from your door not satisfy the clamors of the butcher, grocer, baker and the candle-stick maker.

Is it not a fact that the laity estimates the values of medical service by the number of visits made, the length of time consumed, the distance traveled, or the amount of medicine prescribed, paying little or no attention to skill? And is it not a fact that doctors have accepted this way of estimating the value of their services? Until we get away from the \$2.00 or \$3.00 per visit plan we fear very much that our profession will always be ranked on a low plane.

To change the present method of charging does not necessarily mean to increase it; it is the method wherein the wrong lies. For a service requiring little skill, then a small fee; but for a service requiring great skill, then by all means a fee commensurate. It is somewhat ridiculous to have our services in the management of a case of pneumonia or typhoid fever estimated by the number of visits made at so much per visit. Why some people actually keep *tab* of the number of visits made, and when rendering your bill, if a few dollars is added to round it out to an even number, you are promptly called down.

Many a one will pay \$500 for an ovariotomy or \$200 for an amputation, but that same one will raise many objections to a bill for \$150 for attending a case of pneumonia, because the doctor only paid sixty visits. No class of business men, professional, mechanic, merchant, farmer, or what not, are harder worked and more poorly paid, in proportion of his earnings, than the physician. The practically compulsory

credit system has done us an incalculable injury. John Smith can't get credit at the store for ten pounds of sugar or five yards of calico, and thinks nothing of standing his doctor off for a bill, and will cross over the other side of the street to keep from meeting him, and even tell it as a joke that the doctor's bill is the last one settled, and don't mind telling the doctor to his face that if anything is left after paying the milliner, tailor, confectioner, florist and jeweler and other luxury dealers, that they will pay him something, with never a thought of the *jar* it gives his nerves.

The first idol to break is the custom of rendering bills half yearly. This custom has not only made the doctor *poor*, but a poor business man also. It would seem that every young man who contemplates the study of medicine should first have a business education; send out bills promptly on the first of each month as other business men do, and urge their prompt payment. Who, in your experience, values your services more the man who, after a year has passed, asks you to knock off 50 per cent. from the bill, or the man who pays promptly full value for services rendered? Which do you count on as your friend? The worst enemies a professional man ever has are those whom he charges nominal fees for valuable services and collects nothing.—*Ga. Jour. of Med. and Surgery.*

Medical Legislation.

Recently a bill was introduced in the Ohio Legislature which provides for an examination of all future applicants for the privilege of practicing medicine in Ohio. The purpose of the bill is all right, as it will keep pace with the times in raising the standard of educational requirements. There is such a thing as pushing requirements too far, and this must be guarded against, lest a reaction come that will negate much that has been gained.

A good deal of complaint has been made that the present Board of Registration and Examination has not been as vigorous in its prosecution of offenders as was thought to be possible. To judge from the flagrant ad. pages of the newspaper press, quackery flourishes in this and other Ohio cities quite as much as ever.

There ought to be some way devised that would curtail such enterprise.

Ideals in legislative requirements are rarely reached, and their near approach is only attainable through an enlightened public opinion. That which is better than the needs of the people cannot be enforced. County and township gatherings in the in-

terests of public health are great educators, and actually constitute a chief function of the State Board of Health. It is a pleasure to note the usefulness of the Ohio and Michigan boards in this work, for which too great credit cannot be given.—*Cincinnati Lancet-Clinic*.

A New Emulsion of Cod Liver Oil.

Cod liver oil is more or less indispensable at all seasons of the year, but at this time when the cold icy hand of winter is at every man's throat, we must use it in the majority of our every day cases.

There are a number of cod liver oil preparations on the market, but the wise physician in his search for remedial efficacy and virtue will pick out the kind best suited to his particular patient.

Budwell's Emulsion of Cod Liver Oil with Iodides, put up by the Budwell Pharmaceutical Co., of Lynchburg, Va., is now upon the market is highly recommended in certain cases.

This preparation is very scientifically and skillfully put up under the immediate supervision of Dr. J. A. Anderson, a well-known physician of Lynchburg.

Only the purest oil and chemically pure drugs are used in its composition. The iodides of arsenic, calcium, and manganese are carefully compounded in the emulsion, so that the well-known reconstructive power of the oil is reinforced by the tonic effect of the arsenic, calcium and manganese.

In marasmus and all wasting diseases this combination will be found invaluable and the physician is assured of a certain definite result following its administration.

In catarrhal diseases of the respiratory mucous membrane in the debilitated and aged this emulsion will meet all the important indications. A fair trial will convince the most skeptical of its worth and merit. Numbers of physicians have used it with the most uniform and pleasing results.

An operation on an insane patient at the Wisconsin State Asylum at Mendota, for the relief of perforative peritonitis, revealed in the stomach and intestines a half pound of nails of all sizes, two pocket-knife blades and several twisted pieces of wire. Some of the nails were extensively corroded, showing that they had probably been in the stomach for some time. As far as saving life was concerned, the operation, owing to the advanced disease and serious nature of the lesions, was a failure, but the findings are interesting.—*American Journal of Surgery and Gyn.*

Reduced Fares to Paris Congress.

The Secretary-General of the Congress gives notice of the following reduction in rates:

(1) All the railway companies of France will grant to the members of the Congress a reduction of 50 per cent. upon round trip tickets, as follows: Every member of the Congress will receive, upon application to the Secretary-General, Dr. A. Chauffard, 21, rue de l'Ecole de Medecine, Paris, a ticket which must be stamped at the railroad station where he enters France, upon paying the full price of a single trip to Paris. At Paris the member will have this ticket vised in the office of the Congress, and it will then serve as a return ticket without additional expense. The journey to Paris having been paid entirely, and the return trip being free, there is, of course, a 50 per cent. reduction. It goes without saying that in order to secure this, the return trip must be to the same point at which the original fare was paid. (2) The French line (La Compagnie Generale Transatlantique) will allow members of the Congress a reduction of 10 per cent. on tickets from New York. (3) The Secretary-General has arranged to provide to early applicants a number of lodgings, including light and service, at the rate of five francs per day; and various agencies also advertise reduced rates for lodgings.

For further particulars and application blanks for membership, address,

Dr. H. B. Jacobs,
Sec'y American National Committee,
3 W. Franklin St., Baltimore, Md.

That the patent medicine business has made many millionaires is a well-known fact, but it is now becoming apparent that it may also wipe out great fortunes. The recent failure of H. H. Warner of Rochester, N. Y., well known as the originator of Warner's Safe Cures, is a case in point. After having made a great deal of money in the business and being for years classed as a millionaire, his petition in bankruptcy lately filed shows that his liabilities are \$2,319,027, with no assets. There are 33 judgments filed against him and the unsecured liabilities amount to \$1,381,631. As Mr. Warner was a liberal giver both to science and education in the time of his prosperity, many will very properly regret his disastrous failure. He would be entitled to much more sympathy, however, if his business had not been that of profiting by the popular ignorance of the management of disease.—*Cleveland Journal of Medicine*.

Sterilization of Surgical Instruments by Boiling in Distilled Water.

W. K. Rogers, in the Journal of the American Medical Association of December 16, 1899, says the trustworthy sterilization of instruments used by the ophthalmic surgeon is very difficult. The ideal method has yet to be found, but he has been better satisfied with the results of boiling in distilled water than with any other. By distilled water he does not mean the product of wholesale vaporization, but the condensed steam such as a chemist would use for careful analytical work. If such is obtained the most delicate metal instruments may be boiled for an hour without impairing their surface or sharpness. No amount of soda or other chemical introduced into lime-impregnated water will prevent a deposition upon instruments and an impairment of the cutting qualities. If instruments are to be sterilized by boiling, the nearer we approach perfect purity in the water the better the results. Chemical sterilization, in the author's hands, has proven very unsatisfactory; all aqueous solutions have a tendency to attack the edge of the knives. Formalin alone is free from this objection, but the process involves prolonged immersion, and if employed instruments must be wiped with some sterilized substance before they can be used. Lysol was found to be the least objectionable, but in full strength it cannot be relied upon to sterilize infected instruments in a reasonable time. The absolute reliability of boiling water is so well appreciated that nothing more efficient can be desired. If ordinary hydrant water is used the edge of the knife is dulled and the whole instrument damaged. The addition of soda to the water lessens the damage to the instrument, but only slightly preserves the edge.—*Medicine*.

Water Famine in Brooklyn.

The danger of a "water famine" shows but little signs of abatement. At last reports the storage reservoir at Hempstead was empty, and the Ridgewood and Mt. Prospect reservoirs contained but 207,570,-808 gallons. Inasmuch as the daily consumption sometimes runs above 100,000,000, the danger is obvious. The depth of water is steadily decreasing in these reservoirs, not enough coming in to make up for what is consumed. What a "water famine" means, few realize. It is not that there will be no water, but that the pressure will so diminish that the service to upper parts of houses will be cut off, and as a consequence there will be no supply for water closets except what is carried up or pumped

up. What such a condition means in a city of more than a million goes without saying. Then, too, the danger from the drying of traps in upper stories and the consequent opening of communication with the sewer; this is also one of the serious results of diminished pressure.

The supineness of some city officials in the past is now reaping its harvest. Over and over again the danger which now threatens us has been vividly portrayed to them, but to no purpose. The names of these recreants should be written indelibly somewhere, the best place would probably be in the records of the penitentiary, that officials in the future might know that the public will never forget nor forgive such mismanagement of trusts which have been committed by them to their keeping.

Charges are made that the cry of "famine" is but part of a scheme to frighten the people and compel the acceptance of a plan, frequently proposed, but as yet not adopted by which a private corporation can coin wealth; but this is too monstrous to believe, and the most indisputable proof should be demanded before the charge should be even entertained. To have delayed the completion of the Milburn reservoir and the construction of a pipe line to it was negligence enough, but to exaggerate the present condition of the water-supply to a degree that will inflict great injury on Brooklyn property and Brooklyn interests, in order to foist an unholy scheme upon the city, would be nothing less than a crime.—*Brooklyn Medical Journal*.

Claude Bernard and Counter-Prescribing Among the Pharmacists In His Day.

A series of articles of especial interest to those who contemplate a medical pilgrimage to Paris next year have just appeared in the French magazine, *Le Correspondent*. The title is "Physicians, as Members of the French Academy." The last physician who was a member of the Academy was Claude Bernard. An amusing incident is told of certain pharmaceutical methods in vogue in his day, which years after formed the motive for his investigation into the physiological effects of drugs. As a young man, Claude Bernard served an apprenticeship to a druggist in the small country town in which he was born. Whenever any drug became deteriorated from age, or whenever a prescription was spoiled by some wrong ingredient being put into it inadvertently, or whenever tinctures and other such preparations failed in the making the rule of the shop was *Mettez vous cela de cote pour la Theriaque!* Put that

aside for the Theriaque. The whole heterogeneous collection under this name of "Theriaque" became the favorite medicine for most of the chronic drug-takers in the neighborhood. It was a panacea for every ill and had been known under varying circumstances to cure every affection that flesh is heir to and a few others besides. All this without the printer's ink, the liberal admixture of which makes such remedies so efficient nowadays. It is scarcely to be wondered at that the young druggist formed the resolution of learning something definite and scientific about the effect of drugs on the human system.—*Medical News*.

Beneficent Paternalism.

What energetic measures can do for the stamping out of disease in tropical countries is shown by the work done by the military government in Porto Rico. Dr. George G. Groff, in the *Medical News*, describes the wholesale vaccination of the people, made necessary by the continued presence of smallpox, which is epidemic there as in most Spanish-American countries. When the general order requiring vaccination was issued by the military governor one year ago, examination of records showed that there had been some 3,000 cases of the disease in the preceding two months. The entire work was put in charge of the surgeon of the division, Major John Van R. Hoff, directors and inspectors of vaccination appointed to systematize the work, and the island subdivided into suitable districts, following the usual political divisions into municipalities and barrios.

* * *

It was thought best to employ native physicians and their assistants to do the work, and itineraries were laid out of these in each municipality, to insure the complete and rapid covering of the territory. Since it was impossible to secure a reliable vaccine from the United States on account of the deterioration en route, a "vaccine farm" was established in a neighborhood where cattle were abundant.

Tests for tuberculosis were made at first, but proved negative, and seemed to indicate that Porto Rican cattle were free from the disease. The virus was collected on "points," carefully wrapped and packed, and mailed daily to the directors, who distributed it to the vaccinators. No trouble was experienced in securing an abundant supply of good quality. This vaccine was furnished free of cost to all physicians on the island as well as to the regularly appointed vaccinators. The most careful directions were given regarding the tech-

nique of the operation, cleanliness and asepsis were insisted upon, and careful official inspection made of the workers. The completed reports showed that about 800,000 were vaccinated at a cost of \$32,000, or about four cents each. To this number may be added about 200,000 immunes, who had previously had the disease. In spite of occasional mistakes in method, as of the physician who was found "sterilizing" his points in hot water, the work was thoroughly done, as proven by results. October 20, when Dr. Groff's article was written, not a single case of smallpox was known to exist in Porto Rico, a condition without precedent in Spanish-American countries.—*Medical Standard*.

Death of Dr. Hall.

Dr. George D. Hall, of Galveston, Texas, died at his home December 22, 1899, according to the *Medical News*.

Dr. Hall was born at Newbern, N. C., March 25, 1824, graduated at the University of Pennsylvania in 1848, married in 1854, and was engaged in the practice of medicine at Gaston, Ala., till he entered the Confederate service as assistant surgeon in 1863.

At the close of the war he went to Texas, where he was actively engaged in the practice of his profession until a short time before his death.

He spent a long and useful life, honored, beloved and lamented by all his acquaintances.

He left a widow and one son, Dr. George P. Hall, professor of ophthalmology at the Texas State University.

The late Phineas T. Barnum and the sempiternal Mary Baker G. Eddy deserve a niche in the temple of fame as the ones who reduced the eternal gullible to something like a system. Both were past, the one decidedly past, masters in the art of working the people; both understood how to turn the axiom, "the people want to be deceived, therefore let us deceive them," into dollars. They appealed to the imaginative side of man, and from their own standpoint they said it was good. The one knew that the man is but the child grown up; the other, that man is essentially idolatrous and fetish-worshipping, and that the mass of humanity had rather be fooled than shown its folly. It was Barnum's hobby to have a "What is it?" an acme of mystification, an incarnation of a creature that hitherto existed only in imagination.—*Gailard's Medical Journal*.

Self-Redemption from the Cocaine Habit.

The following account, written by a West Indian apothecary, has been transmitted to us by a prominent New York physician :

In conversation with a medical friend I related to him part of the following, and he advised me to publish it as being of interest to the profession, not many similar cases being known in medical literature. As a sufferer from severe toothaches and with a dread of extraction, painless dentistry being in the place I lived in known only by report, a dentist friend suggested my inserting cotton impregnated with cocaine solution in the tooth. I followed his advice and was relieved for the moment. The pain returning, I continued the cocaine application and thus insensibly got so accustomed to the drug that I could not do without it, pain or no pain ; the tooth was filled after some time, but the habit remained. The way I used cocaine was by slightly moistening a piece of cotton with water and then pressing it on or pouring over it the crystals or powder of cocaine hydrochloride. A quantity of the drug would adhere to the cotton, and, after doubling it up, I inserted it between cheek and tooth ; gradually the saliva dissolved the alkaloid and by swallowing it passed slowly but surely into the system. In this way I used to take generally a gramme (fifteen grains) and very often as much as two grammes (thirty grains) in twelve hours. I never began using it before noon, and was generally through at midnight.

I will now state the symptoms which accompanied the taking or using of the poison : After the first quantities, say between five and ten grains, were swallowed, I felt elated, full of life and vigor, cheerful, seeing everything in the rosiest of lights, my mind would clear up and things incomprehensible to me at other times would become plain and evident. I would be willing to and actually did undergo heavy physical and mental work which under normal conditions I could not possibly have accomplished. It is the most agreeable of sensations, because one feels perfectly and serenely happy. As the dose increased the symptoms would change gradually till, the amount being absorbed, the toxic symptoms appeared. I felt haunted, restless, morose, quarrelsome ; had hallucinations of being persecuted and of impending evil ; my heart would be pounding at a fearful rate, so that I could actually hear its throbbing ; the eyes got glassy, with a fixed staring look ; the tongue was heavy and unable to move at will ; a terrible and in-

cessant hacking cough shook the frame ; the mind was obfuscated ; there was inability to eat, with no feeling of hunger, and there were insomnia and an insatiable craving for alcoholic stimulants. These were the most terrible of the many symptoms. Under ordinary circumstances I can stand no strong drinks, and yet, under the cocaine influence I drank daily a bottle of brandy during those hours, and when no other drinks were on hand I often actually drank pure alcohol, such was the craving for it ; and probably it was due to the cocaine that I never got so intoxicated as the amount of liquor taken would justify one in believing. I have been a slave to this habit for over five years, and during that time many doctors have seen me and have examined me while presenting most of the symptoms mentioned and, yet, not one knew or recognized the symptoms of cocaine poisoning, attributing my ailments to innumerable other causes. This is probably due to the fact that the effects of this drug on the human system have not been thoroughly studied, and therefore are not well known. The object of this communication is to contribute to make its effects known and enable practitioners to know when they have similar patients under their care.

Being a druggist, I had the drug always within reach, and have used it all the time without ever being suspected as a cocaine fiend by anybody, including the medical men called in by my family to attend me ; but one day I awoke to the consciousness that I was doing wrong and that my life was endangered. A pamphlet on morphinism, which fell into my hands by chance, opened my eyes to the danger I was incurring, and I determined to shake off the lethargy which was overpowering me, and to be a man and act like one. It was a hard task which I imposed on myself ; days, weeks, and months of misery and inward struggle followed. My whole system was in arms opposing my energy and will, and the struggle was the severer because I was fighting by myself alone, unknown to anybody, and, yet, I am proud to say, I triumphed, and when I now look back to that time of untold misery, suffering, and shame, I rejoice to be able to look in the eyes of my fellow creatures without shame or fear, a self-saved man. It is six months since I last used cocaine. I can have it when I want it, but, although I dispense it innumerable times and have it constantly within reach, I have personally no use for it. Let this be a warning to dentists and doctors never to put into the

hands of patients drugs of a nature to tend to destroy the highest attributes of mankind.—*New York Medical Journal*.

Antityphoid Inoculations at Military Stations in India.

In the British Medical Journal of January 20, Wright and Leishman of the Army Medical School, Netley, publishes an interesting account of the results of antityphoid inoculations, and of the methods of preparing the antityphoid vaccine. Nearly all of the inoculations were done late in 1898 or early in 1899 by one of the authors while on service with the Indian Plague Commission. All of the inoculations reported upon were of enlisted men. The results among officers were not obtainable. Two sorts of inoculating material were employed. One had been prepared in England a year before, and consisted of a sterilized bouillon culture of virulent typhoid bacillus. The other was a sterilized, fresh (24-hour) culture upon agar. But one inoculation was made in each instance.

The report covers periods of observation ranging from four to ten months, the average being eight months. The whole number of soldiers at the fourteen stations was 8,460, of whom 2,835 were inoculated. Among the inoculated there occurred twenty-seven cases of typhoid fever, or 0.95 per cent. The incidence of typhoid upon the uninoculated was 213 cases, or 25 per cent. The mortality among the inoculated troops was 0.2 per cent; among the uninoculated 0.34 per cent.

The authors call attention to certain circumstances which add much to the significance of the results. The inoculated men were for the most part recently arrived in India, young, unseasoned, and therefore more susceptible to typhoid fever than the older and acclimated men, who composed the great majority of the inoculated class. Furthermore, the inoculations were begun at several stations in the presence of epidemic typhoid fever. In one regiment five soldiers were admitted to hospital within nineteen days after their inoculation. In all there were six men inoculated while incubating typhoid, and these are properly uncounted in the summary. One hundred and forty-two uninoculated men are also uncounted in the summary on account of definite histories of previous attacks of typhoid.

These results, if not convincing, are certainly encouraging. The ratio of chances of attack in the inoculated to the chances in the uninoculated is as nineteen is to fifty. The ratio of mortality among the inoculated

troops to the mortality among the uninoculated seems to have been as ten is to seven-teen. The effect of the inoculations upon the fatality of the disease is not shown in the tables.

The preparation of the immunizing material presents unusual technical difficulties, which have been overcome in a most ingenious and interesting manner. It is by no means likely that either their technique, or their product, is as good as we may expect from the experiments. Indeed, it is the reflection that such good results are so early reached which gives their work its present distinction, and its future promise.

The article includes a very interesting note in reference to the observation made at several of the stations that the inoculated seemed to enjoy exemption from "fever and ague," as well as from typhoid. That injections of dead typhoid bacilli should protect against malarial infection is, as the authors state, an *a priori* improbability, but perhaps worth further attention.—*Maryland Medical Journal*.

A Question of Diagnosis.

There is a dispute between the Indiana board of health and the physicians in the western part of the State over the differential diagnosis of smallpox and chickenpox. The board of health officials assert that a smallpox epidemic prevails at Clay City and other places, but many of the physicians say the disease is chickenpox and point to the fact that there has not been a death, and also that vaccinated persons as well as those not vaccinated have had the disease. The disease, whatever it is, is increasing, and many persons are seeking vaccination. The presidents of the State Normal School and the State University have advised all the students to be vaccinated, and over one thousand have submitted to the operation. The State board of health announces that the disease prevails in fourteen counties in Indiana.—*Medical Record*.

Quack Medicines in Vienna.

The Austrian government has forbidden the sale in Vienna of "pink pills," a quack remedy made in Paris. Physicians are forbidden to prescribe them, druggists and others are forbidden to sell them, newspapers are forbidden to advertise them, and the distribution of circulars, through the mail or otherwise, setting forth their alleged virtues is also forbidden. The reason given for this action is that the composition of the pills is kept secret, and further that the remedy is put forth as a cure-all.—*Medical Record*.

To Prepare Manuscript.

Write upon pages of a single size;
Cross your t's and neatly dot your i's.
On one side only let your lines be seen—
Both sides filled up announce a verdant green.

Correct—yes, correct—all that you write,
And let your ink be black, your paper white,

For spongy foolscap of a muddy blue
Betrays a mind of the same dismal hue.
Punctuate carefully, for on this score
Nothing proclaims a practiced writer more,
Bear this in mind, observe this to the end,
And you shall make the editor your friend.

[*Medical Dial.*

Curl Papers.

We do not like to see the ladies who have had the temerity to add M. D. to their names imposed upon. One such, an appointee under the civil service, physician to the infirmary at Dunning, has been dismissed from the public service. Mr. Irwin, president of the county board, gives, among other reasons for such action, that she refused to go down to the wards at night to visit the sick, "because she had her hair done up in curl papers."

Our sympathies are altogether with the doctor. How could she be expected to visit the wards after she had put her hair in curl papers? To be sure, she might have hidden the hair, curl papers and all, by wearing a nightcap; but that would frighten nervous patients and excite the risibilities of the attendants. The situation is certainly embarrassing. We are reminded of Lincoln, when he was yet a "circuit lawyer" down in central Illinois. It was his habit to sleep in a long, coarse, yellow flannel nightgown, coming down to his ankles. One young lawyer, who saw for the first time, the tall bony form of the future president clad in this unpoetic garb, remarked afterward to his fellow lawyers that "he was the ungodliest figure he ever saw."

We sympathize wholly with the doctor. Only the patients are to blame. What business have they to get sick in the night anyhow? These are not the good old days. These are the days of the woman doctor. Let them wait with their bodily ailments until morning. Patch up the old machinery, and keep it going until daylight, and then they can say, with Whitcomb Riley:

"O dear doctor! come and see
What on earth is the matter with me!
She felt my pulse, and she says, says she:
Quiet—rest—and ginger tea."

[*Chicago Clinic.*

Faith Healing.

It is well known that Dr. P. S. Henson, the popular Chicago Baptist minister, has a defective eye. We go to hear him preach once in a while, and have got accustomed to the peculiar squint of that optic—in fact, we rather like it. But a good man and his wife who are members of the Henson household of faith have felt for some time that their pastor would be much improved if the lame eye could be made like unto the other. These persons are firm believers in the faith cure theory. Why should their beloved pastor not have two good eyes as well as one? They went to see him about it.

"We have been praying for you that you may have two perfect eyes," they said to the doctor, "and have come to pray with you. Will you not ask the Lord here and now to give you a new eye?"

Dr. Henson's reply was quite startling. "What kind of teeth have you?" he suddenly asked the brother.

"Why—why, that's a strange question," he stammered, "but I don't mind telling you that my teeth are mostly false."

"What kink of teeth do you use, sister?" he asked of the other.

"Same kind," she frankly admitted.

"Well, good friends," rejoined the doctor, "you go and ask God to grow some new teeth in your mouths. According to your theory He will do it without delay. When you get your teeth, come around and we will see what can be done about that new eye."

This happened some time ago, so report saith. The good people are still grinding on artificial molars, and Dr. Henson still looks down on his great congregation with one eye. But he can see farther with that bright optic than most people can with two.—*Epworth Herald.*

Treatment of a Case of Facial Neuralgia.

Bernays ("Report of a Surgical Clinic") cites a peculiarly obstinate case of facial neuralgia with treatment. The patient was a lady aged fifty years, who showed a good family history and whose previous health was also good. The trouble began with a severe neuralgic toothache of her lower right molars, and was paroxysmal at first, but after two months became continuous. The paroxysms generally occurred in the early morning, and entailed much acute suffering. The pain was relieved by biting strongly upon some firm object, but returned immediately when the pressure was removed. The touch of anything cold or hot promptly excited a paroxysm. A moderate heat when sustained

produced the opposite effect. In the effort to afford relief four molars were extracted, but without success. The patient strenuously held out against the use of narcotics in any form throughout the entire course of the disease. Antikamnia in ten grain doses (two five-grain tablets) was found efficient as an abundant and was relied upon exclusively. Eight weeks after section of the nerve when the report was written, there had been no return of her former trouble in any degree.—*The Medical News*, January 13th 1900.

Saunders' American Year-Book of Medicine and Surgery.

Saunders' Year Book for 1900 will appear in two volumes as a result of the natural division of the subject matter. The quantity of matter under review has become so immense that its inclusion in one volume would make a book of unwieldy proportions.

The two volumes will consist of about 600 pages each—an ideal size for convenience of handling and reference. Each volume will be complete in itself, paged separately and with its own index.

Vol. I. will be on "Medicine," Vol. II. on "Surgery."

There will be no increase in price, which is \$6.00 for the two or \$3.00 a single volume in cloth.

No man has time to read all the current medical literature, but every one has time to read the essential and necessary facts brought out.

No Use for Bent Needles.

A new student in the training-school was detailed a few days ago to help in the outpatient department of one of the city hospitals. After a man had had a scalp wound sewed up the neophyte was asked by the dispensary surgeon to wash the needles. There were two dozen of them. Two or three were straight, the rest curved in various shapes. She washed the straight ones and threw the rest away. When remonstrated with for the waste, she was greatly astonished to hear that surgeons prized such things as bent and twisted needles.—*Medical Record*.

Buncombe County Medical Society.

At the recent annual meeting officers for the ensuing year were elected as follows: President, Dr. H. L. Baird; Vice-President, Dr. T. P. Cheesborough; Treasurer, Dr. C. V. Reynolds; Recording Secretary, Dr. J. F. Sevier; Corresponding Secretary, Dr. E. R. Morris.

History Repeats.

There is an old story told of a sufferer from melancholia who called upon a famous London physician in the early part of this century. The man of drugs tried all the resources of the *materia medica*, but in vain. At last he said: "You should go to see something funny at the theatre. Try Joseph Grimaldi."

"Alas!" replied the patient, "I am Joseph Grimaldi."

Why repeat this story now? Because after numerous avatars it has finally reappeared in the following form: Dr. S. Weir Mitchell, nerve specialist and novelist, while on his recent foreign tour, called upon an eminent German neurologist to consult him about a nervous trouble. He sent up a card inscribed simply, "Mr. Mitchell of Philadelphia."

The German examined him very carefully. Then he said: "My dear sir, do I understand that you come from Philadelphia?"

"Yes."

"Well, you should have consulted Dr. S. Weir Mitchell of that city."

"I am Dr. S. Weir Mitchell," was the answer.—*Medical News*.

A Mineral Diet.

A dime-museum performer, who was called "the man with ostrich stomach," has been earning an honest living for a year or so by swallowing pins, nails, coins, watch chains, and other dainties. He got along fairly well until he began to gorge himself with pins, when his stomach rebelled, and he was forced to go to a hospital in Brooklyn. There he was operated upon, and two nickel watch chains, one brass chain, two latch keys, six hairpins, one hundred and twenty-eight common pins, ten two and-half inch iron nails, two horsehoe nails, one finger ring set with a stone, and several other equally digestible articles were removed.—*Medical Record*.

The usual blunder is to call it chicken-pox, but a Kansas physician called it small-pox, and created consternation on an east-bound train from Chicago. The patients were two children who, being examined at Pittsburg by a city physician, were found to have chicken-pox. The Kansas physician resumed his journey by a later train. The passengers are said to have been very indignant on account of the Kansan's error. They should have been very gratified to believe that the Pittsburg man was right, if he was right.—*Maryland Medical Journal*.

A Case of Mild Sepsis Treated by Unguentum Crede.

At the meeting of the New York Academy of Medicine, Section on Obstetrics and Gynecology, November 23, 1899, Dr. S. Marx reported this case, which had surprised him because of the good result obtained. He had used this ointment, he said, in a number of other cases, but without observing any benefit therefrom. In this patient the highest temperature had been 102.5 deg. F. and the highest pulse 120. The patient was a primipara in whom he had induced a premature birth at the sixth month because of a grave and rapidly increasing melancholia. On the third day the temperature had risen suddenly to 101.5 deg. F., and nothing could be found to account for this temperature except two caked breasts. At this time the physical examination had been negative. On October 17th, typical pseudo-diphtheritic patches had been found in the vagina and on the vulva and cervix. The parts had been thoroughly cauterized with pure carbolic acid, chloride of zinc, and solution of iron successively, but without result. The parts had then been irrigated very frequently, but there had been absolutely no improvement. Repeated chilly sensations had then been complained of. Having no faith in streptococcus serum, he had tried Unguentum Crede. The ointment had been first used in the evening, and by the next morning there had been a decided improvement in the membranous patches. The ointment had been used every four hours for the first day. In seventy-two hours there had been no trace of the patches. The speaker said that he had never seen any such effect from other remedies.

Dr. John Polak said that he had employed Crede's ointment a number of times, and the results had been extremely variable. In one case the result had been excellent, and was of the more significance because no other treatment had been employed. The case had been seen three weeks and a half after confinement. At the time the temperature had ranged between 102 deg. and 103 deg. F.; the uterus had already involuted fairly well, and there had been no membranous patches. After each application of the ointment the temperature had dropped one to one and a half degrees. The treatment had been continued for over a week, and the temperature had reached the normal and convalescence had been completely established. The case was one of late and persistent sepsis, in which the ordinary local treatment would not have been of value, in all probability. In two cases

of post-operative sepsis in which he had employed this method of treatment he believed some benefit had been derived from the ointment, although he could not speak positively on this point.

Dr. S. S. Jones said that he had used the Crede ointment in a number of cases of miscarriage in which the fever and other symptoms had pointed to a mild sepsis, and in these the ointment had seemed to act admirably. He thought the case reported in his paper last year had shown at least one thing—that the ointment had acted very much like an antitoxin. He believed its use would save life.—*Medical Record*, New York, December 9, 1899.

Prof. Roswell Park, of Buffalo, says in his "Surgery by American Authors," condensed edition (Lea Bros. & Co., New York and Philadelphia, 1899), in Chapter VII., under the heading of "The Surgical Fevers and Septic Infections," the following regarding the treatment of septicæmia:

"Of greatest value also will now be found the silver ointment of Crede (Unguentum Crede.) This permits of absorption of silver through the unbroken skin (as in the case of ung. hydrarg.), and the dissemination throughout the system of the remarkable antiseptic virtues of the silver itself. Many cases of septic infection promptly yield under the influence of the argentine preparations, which Crede has lately introduced."

The following on "Local Treatment of Erysipelas" is quoted from the same chapter:

"Of all the numerous applications which I have ever tried, I have found but one thing which has given the universal satisfaction afforded by the following prescription or something equivalent to it. Resorcin (or naphthalin), 5; ichthylol, 5; mercurial ointment, 40; lanolin, 50. The proportions of these ingredients may be varied, and I often increase the amount of ichthylol, especially when the skin to which it is to be applied is not too tender. The affected parts are anointed with this, and then covered with oiled silk or some impermeable material, simply to prevent its absorption by the dressings; the parts are then enveloped in a light dressing and bandaged. Whenever I have to deal with local evidences of septic infection, I use an ointment essentially the same as this, and have learned to count on it with more reliance than anything that I have ever resorted to. This one better thing hinted at above is Crede's silver ointment, which is to be used as described above, and has been already alluded to in the treatment of septicæmia. As the disease becomes mitigated, the oint-

ment may, if desirable, be reduced with simple lard, and may be discontinued when local signs have disappeared. Absorption of any of these preparations may be hastened by a series of scratches over the affected area with the sharp point of a knife, not deep enough to draw blood, but deep enough to better expose the absorbent vessels of the skin.

"Treatment of threatening phlegmon, or that which is from the outset phlegmonous erysipelas, must be much more radical, and consists primarily of free incision down to the depth of the deepest tissues involved. For instance, in treating dissecting and other septic wounds of the fingers this means incision down to the tendon-sheaths, often down to the bone itself. Unpleasant as this may be, possibly even crippling, it is only by such radical measures, early put into effect, that still worse disaster may be avoided. Finally, some aggravated local cases are well treated by a series of deep incisions, even with the use of the curette, the surface after careful clearing being kept buried under some antiseptic solution (silver lactate 1 to 500) or ointment."

In Chapter XXIV. "Treatment of Wounds—Antisepsis and Asepsis," by Charles B. Nancrede, M.D., the following occurs:

"The silver salts introduced by Crede, though not so generally used, are more effective than those of mercury. Of these the lactate is the more soluble, and may be used in strengths, of 1 to 300 down to 1 to 1000. The citrate is used in the proportion of 1 to 1000 or 1 to 3000."

The Open Door.

The fourth annual report of the board of managers of the Second Hospital for the Insane of the State of Maryland contains some very interesting and valuable matter relative to the open door treatment of the insane. Dr. Jos. Clement Clark, superintendent, states in his report that the methods inaugurated four years ago by his predecessor, the late Dr. George H. Rohe, have been literally carried out. The success of the method is indicated throughout the report, from which the following abstract is made:

"No patient has had a key turned upon him since I have been in charge of the hospital. This seems marvelous, when it is considered that, up to a late date, insane hospitals were built like prisons, with a strong cell for nearly every inmate, with massive bars at the windows, and straight jackets in constant use. What a transition! Occupation, with the largest liberty com-

patible with the condition of the patient, is now allowed. While outdoor employment is a feature of our treatment, it is not applicable in every case, and only such cases as are physically able are permitted to work. It is surprising what a good effect a few hours' work on the farm or in the garden will have upon a restless patient. The motor excitement and restlessness seem to find outlet thereby, and mind and body act together. The exercise is beneficial, increasing the appetite, promoting digestion, aiding the action of the kidneys, stimulating the functions of the skin, and often relieving insomnia; medicine can do no more; moreover, the continued use of any remedy is more or less harmful. The mental effect is also beneficial, helping the patient to fix his attention, aiding memory, and creating a healthy interest in his surroundings. *

* * * In all insane hospitals patients will sometimes elude the vigilance of the attendants and elope, and ours is not an exception, built as it is without bars and locks. As a rule, the eloper is speedily secured and returned by neighboring farmers, to whom a small fee is paid, and in no instance has any sort of calamity to others ensued. Two patients only have remained away over twelve hours during the year. Unless we go back to the prison-like method of yore, escapes will occasionally occur. To this retrogression God forbid."—*Maryland Medical Journal*.

A Terrible Warning.

There was a man who was too stingy to subscribe for his home paper, so sent his little son to a neighbor to borrow one. As the boy was going home he fell down and broke his leg. The father heard his cries and ran out to see what was the matter, but slipped and fell, dislocating his knee and tearing the bosom out of his ten-dollar pantaloons. His wife ran to his assistance, leaving a two-year-old baby on the floor. The baby crawled out and fell down the well, and while the mother was fishing the child out the house caught fire and was totally destroyed. Moral.—Now is the time to subscribe.—*Cambridge (Ohio) Sun*.

"Boys," said a superintendent of a Sunday school, "can any of you quote a verse from Scripture to prove that it is wrong for a man to have two wives?" He paused, and after a moment or two, a bright boy raised his hand. "Well, Thomas?" said the teacher encouragingly. Thomas stood up and said: "No man can serve two masters." The question ended there.—*Medical Dial*.

Phenalgin.

Dr. Bernain, in the *Journal de la Sante*, Paris, says of phenalgin. "It has the double advantage of being an active and perfectly harmless medicine. It is an excellent anodyne for pain in all forms, and especially for the rheumatismal and grippal neuralgia now so prevalent in France. In these cases phenalgin is superior to morphine, quinine, and the bromides."

Another prevalent malady is articular rheumatism, phenalgin quickly battles with the symptoms and averts the most serious complications liable to occur in this painful affection. A few doses of this drug thoroughly subdues the pain of muscular rheumatism or "lumbago." In gout sciatica, menstrual, nephritic and hepatic colics, this remedy in doses of from 5 to 20 grains according to circumstances acts as a perfect analgesic, bringing to an immediate end the physical pain caused by these complaints.

Owing to the stimulant and diffusible properties of the ammonia that enters into its composition, phenalgin is especially useful in spasmodic affections, whooping cough, asthma, the convulsions of hysteria Saint Vitus's dance and even the crisis of locomotor ataxia.

Phenalgin, moreover, may be combined or associated with a number of other active medicines, thus permitting its use in all sorts of painful or febrile conditions. Its alkalinity neutralizes the acids resulting from visceral fermentation in persons of arthritic rheumatism or gouty diathesis. In addition to its sedative and anodyne properties, it produces a complete and decided improvement of cellular nutrition.

It is a remedy, the use of which ought to be better known especially in France, where the majority of acute and chronic affections are complicated with a nervous element that is in nowise to be disregarded."

The Use of Alcohol in War.

The "kaffirgram" from Ladysmith announcing that whiskey was selling at \$25 a bottle was not only an indication of the low supply of certain luxuries in the besieged city, says the *Med. Age*, but was an assurance that alcohol is occupying a very different place in the rations of war to what it did years ago. That it had reached this price when necessary provisions were fairly plentiful indicated that it had not been provided in large quantities.

The waning estimation of the value of alcohol for general purposes is perhaps nowhere more admirably exemplified than in the records of the British army. In old days,

when it was the fashion of our forefathers to drink to excess, the same practice prevailed in the services, and in the army and navy grog was an indispensable and permanent ration. A very different place is now assigned to alcohol in the conduct of modern warfare. No longer is "Dutch courage" the kind of courage thought desirable to attain. The modern generals knows that hardships can be best borne and dangerous climates best encountered without the constant use of stimulants. This conviction has long been gaining ground. Even in the Indian munity Havelock's men performed the greatest feats of endurance on coffee alone as a beverage. To General Wolseley, the present Commander-in-Chief, may perhaps be particularly attributed the growing condemnation of the spirit ration. In the Red River expedition of 1870 Wolseley first discontinued the spirit ration, and it is recorded that no troops enjoyed better health than those engaged. The rum ration was discontinued in the Ashantee war of 1873, and was again prohibited in the Kaffir war of 1877-78. In the Soudan expedition all alcoholic liquors were prohibited, and the men engaged achieved fine physical condition, as regards health and endurance.

The needlessness of alcohol in every-day life is admirably illustrated by military experience, and there is little doubt that stimulants will never again be found in army equipment except for administration under medical control.—*Dietetic and Hygienic Gazette*.

Heat in Australia.

We suffer occasionally from warm summer days and nights in this part of the world, but the inhabitants of parts of Australia would be glad to put up with the worst that we have to endure. Almost every winter we have reports of excessive heat, and this year is no exception. It is stated that on New Year's Day in Melbourne the thermometer indicated 114 deg. F. in the shade at five o'clock in the afternoon, and in the sun during the middle of the day it stood at 156 deg. There were five deaths from heat stroke.—*Medical Record*.

In the treatment of fractures of the long bones, it is practically impossible to bring the broken surfaces end to end in perfect approximation. Our object is simply to accomplish this as nearly as possible, and in the lower limbs to secure such extension as will result in a bone of normal length.—*Milwaukee Medical Journal*.

Prevention of Tuberculosis.

Dr. Charles J. Whalen of the Chicago Medical Society said the number of deaths from tuberculosis in Chicago for the year 1898 was 2416, and the average reported deaths from this disease annually for the past ten years was 2378, 11 per cent. of the mortality from all causes. The United States Government spends annually millions of dollars to prevent the spread of cholera, yellow fever and smallpox, yet to the presence of tuberculosis there exists a spirit of apathy that is a reproach to our intelligence. Intestinal tuberculosis is extremely rare. While infection from milk may be possible, it is extremely infrequent; the chief means of communicating the disease in childhood is by direct infection by inspired air.

The best means of prevention is the destruction of the sputum and the removal of those affected, who are too poor to receive the necessary care at home, to an isolation hospital, which should be provided by the State. It would not be judicious at the present time to make the registration of this disease compulsory, for inspection and disinfection can be safely carried out without working such a severe hardship to these unfortunates. Too rigorous or inhuman restrictions might undo the work already done, or bring it into disrepute, consequently only such precautions should be taken as are really necessary.

It is gratifying to know that Illinois is taking advanced ground on this subject. This view has also been gaining in favor of late in other States as well as abroad. France and Belgium and other foreign countries have provided sanatoria for the treatment of tubercular children. They are also provided with a school, so that the children not only have a chance to be cured, but at the same time receive an education. The poor adult consumptive, too, needs the protection and care of the State, and every municipality should have a sanatorium where those dependants who are afflicted with the disease may receive the necessary attention. The establishment of isolation hospitals for the consumptive poor is the best step that can be taken for the prevention of the disease. Isolation hospitals are not to be advised for the well-to-do, who can afford and will carry out the necessary instructions at home, for it must be admitted that the presence of so many invalids in all stages of the disease must have a depressing influence. A good trained nurse and control of the patient at home will be found more efficacious and satisfactory to the patient than isolation at a sanatorium.—*Medical News.*

Mistaken Diagnosis.

If the newspapers accounts are correct, some of the physicians of Terre Haute, Indiana, are the victims of a mistake that has made them the laughing stock of the community in which they reside. A man supposed to have committed suicide was examined by three doctors and pronounced dead. While the coroner was being summoned, and some time after the disappearance of the doctors, on attendant, with intentions of covering the corpse from the eyes of curious spectators, was much surprised to see the supposed dead man raise up and say, "What in h— are you trying to do?" To make the story more effective, the newspapers claim that the would-be suicide had completely recovered and is now asking the doctors to make more certain when they again pronounce an opinion as to death. If the report in substance is true, the question arises as to the kind and quality of doctors.—*Fort Wayne Medical Journal Magazine.*

The Transplantation of Thyroid Gland in Animals.

In the *Centralblatt für die Grenzgebiete der Medizin und Chirurgie* for November, 1899, von Enderlen reports his experiments in transplanting the thyroid gland in dogs and cats. Two series of experiments were made; in one the entire thyroid gland was transplanted, and in the other only one-half the gland was transplanted at one time. When the entire gland was transplanted at one time the reaction upon the animal was very marked, but one-half was followed by very little constitutional disturbance. The glands were transplanted to the peritoneal cavity, or between the peritoneum and the abdominal wall. In most cases the gland formed new vascular connections. In the few instances in which necrosis of the transplanted thyroid developed, it was due to death of the connective tissue. In its new situation the transplanted gland produced colloid, but not in sufficient quantity, or at least it did not gain access to the circulation in sufficient amount to maintain the health of the animal, so that about six months after the operation the animal died.—*Medicine.*

Raleigh Academy of Medicine.

The following officers have been elected for the ensuing year: President, Dr. A. W. Goodwin; Vice-President, Dr. F. J. Haywood; Secretary, Dr. H. A. Royster; Treasurer, Dr. R. S. McGeachy; Board of Censors, Dr. James McKee, Dr. W. I. Royster, Dr. A. W. Knox.

On Narcosis with Chlor- and Brom-Ethyl in the Small Gynæcological Operations.

Dr. Paul Mathes, of Prague, has a short article thus entitled in the Prague Medicinische Wochenschrift, xxiv. Jahrg., Seite 243. He observes that for the shorter procedures which do not justify the use of chloroform or ether surgeons have possessed for some time in brom-ethyl, and more recently in the last three years in chlor-ethyl, inhalation anæsthetics which, according to recent reports, may be used with comparatively little danger, and especially in those cases in which local anæsthesia is not available.

He has tried these anæsthetics in such operations as curettement of the uterus. As to the question whether curettement is sufficiently painful to justify a resort to chloroform, he considers two factors: first the degree of sensibility of the uterus to pain, and secondly, the sensitiveness of the patient. It is difficult previous to operation to find indications for the decision of these points, but certainly great variations are found. Formerly, though Mathes in these cases chiefly used deep chloroform narcosis, later on he operated without any anæsthetic at all; it resulted that some patients manifested great pain, while others were pretty quiet, so that gain by chloroform was sometimes more than counterbalanced by its unpleasant after-effects.

Thus he thought that the use of brom- or chlor-ethyl would satisfactorily obviate the difficulty; and so far experience has confirmed his idea.

The technique is as follows: The patient is first cleaned in the usual way, then the half of the contents of a flask which holds 15 grammes of brom-ethyl is poured into one of two masks which lie to hand, and which is firmly applied to the patient's face. After sixty seconds sufficiently deep narcosis is produced for the commencement of the curetting. When the first signs of awakening are noticed, the other half of the drug is quickly poured into the other mask and as quickly applied.

The duration of the anæsthesia with this method varies from five to ten minutes, so that it can hardly be necessary to make use of a second flask, which, however, may be done without hesitation if required, as is the case almost always in the case of excision of the cervix for cancer, which takes longer time and often must be very carefully carried out. Thus it is, too when the part can only be scraped and cauterized in inoperable cases, and the patient's condition is such that one does not care to give

chloroform with its attendant inconveniences.

Awakening from brom-ethyl narcosis generally happens suddenly, the patients at once answer questions, and relate the more or less pleasant dreams which they have had. Vomiting was only three times observed in fifteen patients, none of whom had fasted, and in every case it was only slight.

Narcosis with chlor-ethyl is quite similar. The drug is known as "kelen," and is generally sold in tubes. When poured into a mask containing some gauze it freezes. Not one of five women narcotized by it vomited afterwards, and all immediately on awakening felt quite well.

By administering these drugs in two portions, the anæsthesia lasts longer, the vapour is not so concentrated, and the feeling of oppression at the commencement is not so violent, and the amount of the expiratory products (resulting from the drug inhalation) only half as great.

Mathes intends to continue his trials and to report more in detail later on as to larger series of cases, though he is already of opinion that these drugs may be warmly recommended for the smaller gynæcological operations.—*Treatment.*

The Proper Performance of Vaccination.

For many years the operation of vaccination has been considered one of the trivial things in medicine, which could be performed by undergraduates, or even by laymen, as by physicians. Not a few of the laity are in the habit of vaccinating themselves or their families. When points were used they were easily contaminated; probably not while in the hands of the producers, but as commonly put upon the market, wrapped in the rubber protective, they would easily become contaminated as soon as the wrappings were removed. As a rule they were retailed in drug stores in which little care was exercised in their preservation. Even if they did not become contaminated, there was a liability of their simple deterioration. The best accepted methods of the present time require vaccination to be done with a glycerinated lymph protected in sealed tubes. Not only is a better and more reliable product thus secured, but if properly prepared there is no danger of contamination and sepsis,

The laity should be taught that the operation of vaccination, while not a grave and serious one, should be under careful professional supervision. The physician himself should not perform it in a careless or hurried manner. The site selected for the

operation should be carefully cleansed, using green soap, or failing this ordinary Castile soap, with a stiff brush. The part is then cleansed with clean water, and the virus is best introduced through a number of superficial parallel incisions made with a sharp lancet. The site of the inoculation is then to be protected by one of the vaccination protectors commonly sold; or an excellent substitute is found in one of the large union plasters. This is to be fastened to the skin so that the hole in the plaster includes the site of the inoculation. It admits of ready inspection, and all such cases should be seen at least twice after the operation. Not only is this necessary to ascertain if the vaccination has been successful, but to early meet any complications which might develop.

Much of the distress shown by the general public, and of the belief that diseases are conveyed in this manner, is due to secondary infections from careless vaccinations, or improper care of the vesicle after it is formed. The use of glycerinated virus with the care indicated will do away with those occasional secondary infections that have furnished ammunition for the antivaccinationist.—*Medicine*.

The Value of Inhalation of Antiseptic Nebulae.

Much has recently been said and written regarding the effect of the inhalation of nebulized medicaments in the treatment of various inflammatory conditions of the respiratory tract, and some have even contended that nearly all pulmonary affections, phthisis pulmonalis included, offered special conditions for treatment by inhalation of nebulized medicaments and are more quickly amenable to this form of treatment than any other.

Like many other things, this method of treating affections of the respiratory tract has been much over-rated in many particulars so far as its therapeutic efficiency goes. No one who employs the methods can doubt its beneficial effects in chronic bronchitis, where the direct contact of the medicament seems to lessen the bronchial secretion much better than any medication which reaches the effected areas through the circulation. In pulmonary tuberculosis neither inhalation of medicated vapors nor the injection of different oils into the respiratory tract have given any definite results so far as a cure is concerned. It really could not be expected when we consider that a collateral zone of congestion surrounds the tuberculous area, as demonstrated by Councilman, which contains no

tubercle bacilli and prevents anything from reaching the tubercular area itself. Inhalation in tuberculosis is simply an adjuvant, its particular value being in exciting deep breathing which is much desired in impaired respiration of tuberculosis.—*Fort Wayne Medical Journal*.

The Future of Appendicitis Cases.

E. J. Cottier, (*Revue Mensuelle des Maladies de l'Enfance*), in examining the ultimate results in 86 appendicitis cases treated by Broca, ranging in age from a few months to fifteen years, divides them into three classes: (1) Patients not operated on; (2) patients operated on during an acute attack; (3) patients operated on in the afebrile period. Cottier's aim is to show by analysis of Broca's statistics that the latter is justified in taking a position against immediate operation in every case, and against searching for an appendix which is at the bottom of a purulent cavity. Of these, (a) 19 went out without operation: of the 19, 5 returned after a fresh attack, and were operated on in the afebrile period; 13 had no pain after the operation, and remained well; 1 had slight colicky pains. (b) 47 were operated on during the acute attack; 1 for general peritonitis. The appendix was removed from only 3. Of these 47, 28 had no trouble afterwards and remained in perfect health; 4 went out with a fistula, and were subsequently operated on, and remained in perfect health. (c) 30 operated on during an interval (8 of them had been operated on previously during an acute attack). At the time of writing, all 30 were in perfect health; 3 showed slight separation of the muscular walls, and a slight impulse on coughing. (d) 3 died of intestinal obstruction, due to peritoneal bands, at intervals of eight months, one month, and seven months after operation; one of these was not operated on in the first place by Broca. Two were suppurative cases, showing how adhesions were the cause of accidents: one of these was an operation in the acute stage for abscess; one was operated on in the afebrile period, but in this the extent of the suppuration necessitated drainage, and a temporary fecal fistula occurred. All the patients were seen again from six months to five years after they left the hospital.—*Treatment*

Bigamists in Hungary are compelled to submit to a queer punishment. The man who has been foolish enough to marry two wives is obliged by the law to live with both of them in the same house.—*Med. Age*.

Shall We Charge for Medical Advice given by Telephone.

The telephone is not an unmixed blessing. Although we hardly see how we ever got along without it, we are sometimes tempted to declare we wish there were no such thing in existence. The interruptions it causes are innumerable and most exasperating. The night calls are undoubtedly increased by this convenience for summoning the doctor. Of course the telephone often obviates the necessity of a trip; sometimes when the doctor does not want it and again sometimes when he would rather make it. On the other hand, it enables people to annoy the doctor with unnecessary interviews. Necessary or unnecessary, they take the physician's time and his knowledge and tax his nerves, and he sometimes poses himself with the query whether he ought to charge for those interviews. With some patrons such a charge would be paid without a question. They never ask for an itemized bill, and the doctor, feeling that he is absolutely trusted, is extremely careful to be perfectly just or to lean to the side of generosity in his charges. Other patrons would not like to be charged for a few minutes' advice over the wire. Now, there ought to be a general understanding, and some kind of a rule to go by in dealing with this matter. The individual case must be left to the doctor's knowledge of his people and their circumstances and the doctor's own conscience. We believe the profession is pretty liberal in giving advice in many cases where it is hardly expedient to charge a fee. And again, it is sometimes justifiable to charge a fee where it would be hard to specify the service rendered. We are told that the account book of the famous Irish surgeon, Dr. Colles, showed many such entries as this:

"For giving ineffectual advice for deafness, 1 guinea."

"For telling him that he was no more ill than I was, 1 guinea."

"For nothing that I know of except that he probably thought he did not pay me enough last time, 1 guinea."

It was not the doctor's fault that the deafness was found to be incurable; nor that a person who was not ill sought his advice and required him to ascertain that no disease was present.

Evidently Dr. Colles thought that whoever took his time and attention, and professional knowledge should pay for them. He was right. And that is a good general rule to go by in this telephone problem.

Another good rule would be that when advice or a prescription by telephone ob-

viates the necessity of a visit or an office consultation it should be charged for.

Otherwise the doctor's time and his gray matter are drawn upon without compensation, and he is further drained by having to pay for the very apparatus that is used to extract them from him.—*Cleveland Medical Gazette*.

Would Surgery Suffer if Iodoform was Abolished?

E. C. Brush, in the Journal of the American Medical Association of December 16, 1899, sets out to answer the above question. He says the use of iodoform is on the wane, and he desires to further restrict its use. Accordingly a large number of letters were sent to various surgical clinics asking certain questions relative to the value of iodoform and the frequency of its use. The first of these was, "What germicidal powder do you prefer?" Of the eighty-four replying, twenty-seven used iodoform, twenty-four used no powder of any kind, twelve used boric acid, and eight used aristol. The remaining thirteen used acetanilid, nosophen, iodol, etc. To the question, "Have you seen any bad effects from using iodoform?" seventy-three reported that they had seen bad effects, and eleven had not. Four of the eleven had seen no bad effects because they had not used the drug. Thirty-seven thought that the drug could be abolished without any detriment to surgery, and forty-seven believed that the detriment would be in a general way; twelve limited the loss to the treatment of surgical tuberculosis, and eight considered the loss to be only when it is used in connection with the manufacture of surgical dressings and in specific cases.—*Medicine*.

Mortality in New York State.

The State Board of Health at Albany reported on February 2nd that the number of deaths from all causes for 1899 was 121,820. This is 820 more than in 1898 and 4740 more than in 1897, which was a year of unusually low mortality. The death-rate per 1000 is 17.3, which is the average death-rate for the past ten years. The infant mortality was less than the average by nearly 5000 and is 1800 less than that of last year, 29 per cent. of the deaths occurring under five years of age against the average of 35. A point to be noted in connection with the antitoxin treatment is that compared with the average of ten years the deaths from diphtheria are but little more than half as many, although the number is 175 greater than in 1898. Diarrheal diseases caused 2000 fewer deaths

deaths than the average. Whooping-cough, measles, scarlet fever and malarial diseases all caused fewer deaths than the average. Smallpox caused 21 deaths, all save three of which occurred in New York City. The outbreak in the western part of the State, beginning in May, 1898, continued till midsummer of 1899, reaching forty-five localities in fourteen counties and attacking 320 individuals and producing but one death. At the end of the year the State is believed to be free from smallpox. Grip is estimated to have caused 7000 deaths from January to April. An epidemic of modest severity prevailed at the close of the year. The deaths from acute respiratory diseases were excessive on account of it, 18,000 deaths, or nearly 15 per cent. of all deaths, having been caused by such diseases.—*Medical News*.

Treatment of Neurasthenia.

The close contact of physician with patient is of extreme importance in the cure of neurasthenia, according to O. Dornbluth (*Munch. med. Woch.*, January 16, 1900). A thorough physical examination will awaken confidence and prevent errors of diagnosis and the patient should be informed of the true character of his disorder. The most important rules to keep the patient in bed and absolutely at rest for from one to six weeks, depending on the severity of the case. Where this is impossible, the recumbent posture should be assumed during all leisure moments. Strict dieting is not necessary; even coffee and tea may be allowed, but alcohol is to be strictly interdicted. Even when nervous dyspepsia is present the regular plan of feeding five times daily at intervals of two and a half to three hours is admissible, but when great irritability of the stomach dominates the clinical picture, the diet should be similar to that for gastric ulcer, or solid and liquid food alternately every one and a half hours may be given. To quiet the nervous system the best results were obtained by applying cloths wrung out in water at 59 deg. F. to the abdomen and covering these with flannel, or by giving a bath at 81-88 deg. F. with the tub but half filled, for four minutes. Massage is not to be resorted to, but general faradization with weak currents is excellent. As for drugs, a depreciated condition of the blood demands iron, preferably in organic form, while, for the severe manifestations of the disease codeine acts almost as specific. In selecting sanatoria, especial care is necessary to choose such which really meet the indications.—*Medical News*.

The Danger of Performing Needleless Operations Upon Hysterical Patients.

(*Deutsche Med. Wochenschr.*, September 2, 1899). M. Sander reports two cases bearing upon this subject. A man of twenty-three presented the clinical picture of intestinal occlusion, and a young woman that of perforating peritonitis. Each was operated on, and everything found normal, the first undergoing operation twice and the second four times, until it was suggested to tattoo "Beware" on their abdomens. Sander thinks that such mistakes could be avoided by more careful search for hysteric antecedents. In the observations reported, the lack of proportion between the pulse and the fever, and also between the general appearance and the severe symptoms, the rapid changes in the symptoms, their severity in the presence of the physician and subsidence in his absence, combined with evidences of hysteria, should have warned against intervention. He also notes the "elective" character of the vomiting, and that meteorism can be caused by voluntary swallowing of air. He classes hysteria as a form of degenerative psychosis with many points in common with the severer forms. Hospital treatment is directly injurious. The patient should be in a "closed establishment" and all his complaints systematically ignored and attention diverted, with general tonic treatment, suggestion and faradization later.—*Treatment*.

Contract Surgeons for the Philippines.

The medical department of the army is now in need of some additional assistance in the Philippines, and it is desired that candidates for appointment as acting assistant surgeons will make application to the surgeon-general of the army. Applicants must be graduates of reputable medical colleges, who have had practical experience, since graduation, in hospitals or in private practice. Candidates between the ages of twenty-five and thirty-five are preferred. Candidates should forward with their application one or more letters from well-known professional men, giving testimony as to their character and qualifications. Appointments will not be made through political influence, and letters designed to produce political effect will injure rather than benefit the applicant. All applicants will be examined as to their physical and professional qualifications for service in the Philippines before they are given a contract. Contracts are made for one year, with the understanding that the approved candidate will remain in service for a longer period if his services are required.—*Medical Record*.

Treatment of Hæmatemesis by Surgical Interference.

(British Medical Journal, October 21, 1899).—G. E. Armstrong, of Montreal, brings forward two cases of surgical interference in hæmatemesis, one successful and one fatal. He further gives an analysis by Wyatt Johnson of the sources and causes of bleeding from the gastric mucous membrane.

1. Bleeding from an eroded surface, or from an eroded vessel in the base or wall of an ulcer.

2. Bleeding from passive congestion, as in cirrhosis of the liver or other forms of portal obstruction, or in heart disease. In most of these cases the serious hæmorrhages come from œsophageal varices.

3. Abnormal states of the blood, as in leukæmia (usually associated with the obstruction), also rarely in hæmophilia, etc.

Besides this, from reflex causes, such as vicarious menstruation, the blood may come, not from the stomach or intestine, but from some adjacent organ, as in aneurysm. Traumatic causes are rare.

Clinically, cases of hæmatemesis may be divided into two distinct classes, those in which occur frequently repeated small hæmorrhages, and those in which the loss of blood is in larger quantities, and it would seem that each class has a distinct pathological lesion, and this should be borne in mind in the consideration of the treatment of hæmatemesis, medically or surgically; and, however efficient hypodermics of morphine and ergotin may be in small hæmorrhages coming from the capillaries and small venules of the surface of the mucosa, it may not possibly be considered rank heresy to question their therapeutic value in the presence of a considerable lesion in the wall of a considerable artery. It is also to be noted that the bleeding point in the case the author reports was in every instance accessible, situated in a part of the stomach wall that could be readily reached, or, if duodenal, in every instance it was put outside the pyloric ring.

If, then, we can exclude aneurysm, which should generally be possible, and leukæmia, which should be possible with the aid of the microscope, and cirrhosis or other cause of portal obstruction, it would seem to be the surgeon's duty to interfere in suitable cases; and suitable cases are those first of frequently repeated small hæmorrhages, which persist in spite of medical and dietetic treatment, and which threaten to destroy the life of the patient; and, secondly, in all cases of a large hæmorrhage which, in spite of medical and dietetic treatment, recurs. In these cases operation

should be performed after the second hæmorrhage.

For hæmorrhage occurring in cirrhosis and portal obstruction, the surgeon cannot accomplish any good. In these cases the hæmorrhage is generally from a varicose œsophageal vein, a part difficult of access, and secondary to a pathological lesion but little amenable to any form of treatment.—*Treatment.*

Marshall Hall and Multiple Sclerosis.

The quickness of perception and the accuracy of observation of the physician of earlier times has been frequently remarked by those who have taken the trouble to read the productions of the older authors. Some time ago, while the writer was reading the very enjoyable and lucid "Lectures on the Nervous System and Diseases" by Dr. Marshall Hall published in 1836, he found in the lecture on "Paralysis Agitans, this very interesting observation: "Of the hemiplegic paralysis agitans, I have long had an interesting case under my care: — Macleod, aged 28, is affected by weakness and agitation of the right arm and leg, augmented on any occasion of agitation, and on moving; it is observed as he walks, or when he passes his cane from one hand to the other; there is, besides, a peculiar lateral rocking motion of the eyes, and a degree of stammering and defective articulation."

This very apt and striking clinical picture of a case of multiple sclerosis is the earliest of which I have any knowledge. The conception of the nervous system and its diseases at the time of Marshall Hall was not perfect enough for the understanding of the nature of a disseminated sclerosis, and it was left for a more recent writer to discover and make known the relation between the clinical manifestations and a pathological basis, but it is of interest to note this, which I believe to be the first description of a case of this most interesting disease.

Hall's description of the intention tremor, the paralysis, speech defect and the nystagmus is apt and accurate and when taken with the age of the patient admits of no question as to the certainty of its being other than a classical case of "Scleroses en Plaques Disseminées.—*Bulletin, of the Cleveland Hospital.*

Adhesions after Laparotomies.

(Beitrag zur Klin. Chir., xxiii. 2).—Steffens has been making a study of forty-five individuals on whom laparotomy had been performed several times at Kummell's clinic, thus allowing inspection of the con-

ditions consecutive to previous operations. He found that in every case in which the operation had been followed by a rise in temperature attributable to the condition of the abdomen, adhesions had formed, while not a trace of adhesions was to be found in the cases without post-operative hyperthermia. The conclusion that the development of adhesions is chiefly due to some slight peritoneal infection, not sufficient to cause a general peritonitis, yet determining a slight rise of the temperature, is evident. He also found lesions of the serosa and the lack of peristaltic movement of the intestines, factors in the production of adhesions. On this account Kummell tries to obtain an evacuation of gases within twelve hours of the intervention, by means of an injection, or the insertion of a canula when the intestines have been sutured.—*Treatment.*

Collection of Vital Statistics.

Physicians and students of mortality statistics will be interested in learning of the work now being accomplished by the Chief Statistician of Vital Statistics of the United States Census, by the authority of the Director, Hon. William R. Merriam. It is a practical effort, necessarily of limited scope, to secure the adoption of a uniform certificate for the return of deaths and looking toward the establishment of a common national system of collection of vital statistics for the purpose, primarily, of the Census tables and publications.

It has been found that there is much unnecessary and objectionable variation in the methods employed to collect and register death returns. The census office has undertook to secure a modification or amplification of the death certificates so as to have them include the items necessary to obtain census data. A model return form has been prepared and submitted with explanatory correspondence to each registration office or officer controlling the preparation of the state or local office. The result has been more gratifying and important than even the census office expected, as not only have the items in the specimen form been very generally adopted, but the registration officers have abolished many practically obsolete local variations in their certificates and the latter have been made to conform to one standard more nearly than ever before.

The Director of the Census confidently expects that physicians everywhere will appreciate the desirability of the new order of things, and that they will earnestly and actively co-operate in securing prompt and

accurate mortality returns of the uniform character required by Congress and sought for by statisticians. He recognizes the fact that failure on the part of physicians to give vitality to the common standard by carefully reporting the items that may be new to their certificate will be fatal to the end in view.—*Fort Wayne Med. Jour. Mag.*

Tuberculin Test in the Diagnosis of Tuberculosis.

Reference was recently made in these pages to the observation of Dr. Otis on this subject. While not questioning the value of tuberculin as a diagnostic aid, it seems to the writer that it falls notably short of infallibility both from a negative and positive point of view. Dr. Otis in a recent paper in the Journal of the American Medical Association, after studying a large series of cases, while claiming that it is more reliable in the early stages where it is needed than in the later ones where it is not, presents the following conclusions:

1. The tuberculin test indicates early tuberculosis by a general reaction before it can be detected by other methods, except the X ray, in the large majority of cases, with a dose of from 5 to 10 mg. of Koch's original tuberculin.
2. No injurious results occur from the use of tuberculin in these doses.
3. Proved tuberculosis in a more or less advanced stage may fail to give a general reaction from doses of from 10 to 12 mg.
4. Syphilis gives a reaction in an undetermined proportion of cases.
5. There is a dose, undetermined, at which a non-tuberculous person may react or simulate a reaction.

The value of the X ray examination in cases of incipient tuberculosis does not appear to be fully appreciated. On this point Dr. Otis says: "The X ray examination, in the hands of an expert, seems to be a more accurate and delicate test of early lung disease than even tuberculin, and without the fear of possible injury as with the latter, but the required technic and experience and the expensive apparatus limits its use to the few." The obvious objections to the use of the X rays in the cases are growing less and less as X ray machines become more numerous and more frequently used.—*Fort Wayne Medical Journal.*

Teacher: "What happens when a man's temperature goes down as far as it can go?"
Smart Scholar: "He has cold feet, ma'am."—*Cleveland Medical Gazette.*

A Case of Appendicitis.

A privilege of examining the early appearance of the gut after a successful end-to-end anastomosis is unique and deemed of sufficient interest and importance for a detailed report.

Rupture of Gangrenous Appendix; General Peritonitis; Incision and Drainage; Fecal Fistula; Resection with End-to-End Anastomosis; Ventral Hernia; Herniotomy; Recovery.—F. F., age 10, white, male, entered St. Alexis Hospital for operation for acute appendicitis. He gave a history of having had the attack seven days previous to his entrance. The entire abdomen was greatly distended and exquisitely tender. The pulse was 152 and thready.

He was anesthetized and quickly operated. The pus under tension spurted out on opening the peritoneal cavity; the gangrenous appendix was readily found and removed. The opening was made wide and the cavity washed out with salt solution and extensive long gauze siphon drainage inserted.

The case seemed almost hopeless and hung in the balance for about two weeks, after which he slowly improved. In the third week a fecal fistula developed, which, on account of the intensely irritating character of the discharge, was diagnosed as being of the ileum. Again, for about two weeks the prognosis was most unfavorable. After more than a month of suffering from the extensive excoriation of the skin over the whole area involved—it all becoming raw and bleeding—an attempt was made to close the opening in the intestine by lateral suturing, but this failed. Again resorting to all possible expedients, the mother as well as the little patient insisted upon resection. I happened to have mentioned and described this operation to a professional friend while looking at the wound one day, and ever after on my entering the ward the child would beg and even cry for "resection."

Under chloroform anesthesia the intestine was separated for some distance both above and below the fistula, and resected near a basal supplying artery on each side. End-to-end anastomosis was then made using cat gut for mucosa and silk for the peritoneum. Both the large and small coils of intestines were invested closely with adhesions and these were not disturbed. The original opening required but little modification and was allowed to remain open as before. Union was prompt and the abdominal wound soon closed.

On his leaving the hospital, arrangements were made for operating upon the

hernia that was sure to develop. On September 28, 1899, eight months after the original operation, the hernia was closed. At this time his condition was good, pulse regular, rhythmic, of fair tension and volume, rate 90. The old scar was six and one-half inches long and three and one-half inches wide at the widest point. The urine was normal and bowels regular. The red corpuscles numbered 4,860,000 and the white 7,000.

The operation consisted in dissecting out the entire scar and all the cicatricial tissue. The edges of the fascia were retracted far from the margins of the wound—this was especially marked on the inner side. On exposing the intestine the point of resection was found the lumen was narrowed to an appreciable degree only, the most distinguishing mark being the whitish line at the point of union. The blood vessels which had served as landmarks for the point of resection were easily identified and their branches were richly anastomosing. The extensive adhesions among the intestines observed at the time of resection had almost disappeared. Primary union followed and the boy is now well.

The reason that almost all of the bowel contents escaped during the existence of the fistula was on account of a valve-like reduplication by partial prolapse of the mucous membrane, thus shutting off the distal bowel.—Crile, in the *Bulletin of the Cleveland General Hospital*.

The Nutrition of the Lens and Its Relation to Cataract Formation.

(Stricker.) The lens is practically immersed in its nutritive supply, and the fluid which has passed through the capsule by osmosis permeates all the inter-fibrillar spaces; hence, literally, the fibres are bathed in nutritive fluid, a condition more perfect in the cortex than in the nucleus, where the fibres are more closely packed. During each accommodative act the fluid in the inter-fibrillar spaces must change its position, and in this manner currents are set up, by means of which the fluid which has served its purpose is forced onward, and fresh fluid enters the lens, the accommodative efforts producing an effect which may in the lens be likened to the diastole and systole of the heart. Later in life, when the nucleus has become less resilient, and its lamellæ denser, and the nucleus, as a whole, no longer gives during the accommodative efforts to the same degree as the cortex does, this leads to the formation of splits and fissures, in which the nutritive fluid stagnates and is subsequently not

pressed out. In consequence the neighboring fibres undergo degenerative changes. The aqueous obtained from patients having cataract contained more albuminous substance than the aqueous of the normal eye.

Though no analysis has been made of the vitreous during the progress of cataract formation, attention has been called to the fact, clinically noted, that opacities appear in the vitreous, indicating a degeneration of the same. The increase of albumen in the aqueous is a result of the cataract, as cataractous lenses contain less albumen than healthy ones. It is a well-known fact that the direct contact of normal aqueous and vitreous with the lens fibres causes these to swell up and dissolve in the living eye. Hence there must be something present in the aqueous and vitreous which, with a perfect integrity of the lens existing, is prevented from entering the capsular sac. There are conditions in which nutritive disturbances may only be active for a certain period of time, not only affecting the growth of the fibres, but also their transparency. Subsequently a normal nutritive supply is again supplied, and the epithelial cells produce normal fibres, which are applied over the affected lamellæ, and thus is explained the zonular or lamellar cataract.—*Journal of the Eye, Ear and Throat Diseases*.

The Gallinger Bill.

Certain changes have been made in the Committee on the District of Columbia, relative to Senator Gallinger's bill for the "Further Prevention of Cruelty of Animals in the District of Columbia." The Committee, as it now stands, consists of Senator James McMillan, Michigan, Chairman, and Senators J. H. Gallinger, New Hampshire; H. C. Hansborough, North Dakota; R. Redfield Proctor, Vermont; J. C. Pritchard, North Carolina; Lucian Baker, Kansas; George L. Wellington, Maryland; S. R. Mallory, Florida; W. V. Sullivan, Mississippi; W. A. Clark, Montana; Thos. S. Martin, Virginia; Wm. M. Stewart, Nevada; and Richard Kenney, Delaware. Personal letters may be addressed to them or other Senators. Petitions should be addressed to the Senate of the United States.—*Boston Medical and Surgical Journal*.

Now the osteopaths are going to close all the state hospitals for the insane by resetting the bones of the neck upon which insanity depends. What marvels are being accomplished at the close of this nineteenth century!—*Iowa Medical Journal*.

Inflammability of Celluloid Hairpins to the Static Breeze.

The editor of the Journal of Electro-Therapeutics reports a disagreeable experience while administering the static breeze to a young lady who had fastened her hair with celluloid hairpins. During the administration of the breeze from an ordinary static head crown which was about eighteen inches from the hair and attached to the negative pole of the battery, the young woman suddenly gave a scream and a column of smoke was seen to arise from the patient's head. The motor was at once disconnected and the examination disclosed three celluloid hairpins which had been ignited, and had each burned away the hair for a space the size of a quarter of a dollar. The scalp was quite seriously burned in one place. He recommends that the hair should always be examined for celluloid pins before administering the static current.—*Bulletin of the Cleveland Hospital*.

The Plague.

In Honolulu, up to January 24th, there had been fifty five cases of plague with forty-one deaths. The health authorities, soon after the disease appeared in the city, adopted the radical plan of destroying by fire every infected building, but on January 20th the fires got out of control and spread from one building to another in the native and oriental quarter, until nearly the entire district was in ruins. Four or five thousand persons were rendered homeless and Chinatown was wiped out, but it is believed that the advance of the plague was stayed.—It is stated, apparently officially, that Rio de Janeiro and Santos, in Brazil, are now entirely free from the disease. A few cases of plague have occurred at Ensenada, Argentina, and the ships of the United States South Atlantic squadron under Admiral Schley were quarantined on that account when they arrived at Montevideo from Ensenada.—*Medical Record*,

First Aid to the Injured.

Customer (emerging from bargain counter)—Help! My leg is broken.

Floorwalker—You will find the crutch department, sir, on the fourth floor, in the rear.—Judge.

In wounds necessitating the ligation of the brachial artery it is well to remember that while the inner edge of the biceps is the guide to this vessel, the edge of the mussels slightly overlies the artery, and must be lifted up a little to expose the vessel.

Joint Affections in Gonorrhœa.

B. G. Moynihan (Lancet, November, 18, 1899) in a clinical lecture describes the various forms of joint disease connected with gonorrhœa. He adopts König's classification of four varieties: (1) hydrops; (2) sero-fibrinous; (3) empyema; (4) phlegmonous. Attention is drawn to the chronic course which is run by most cases, and to the severity of pain compared to intensity of local inflammation. A typical case of each variety is described as follows:

1. *Hydrops* is the least severe form. A patient with (usually) a slight attack of gonorrhœa chances to observe that his knee is swollen. There is no fever, no ill-health, little or no pain or tenderness, merely an increase in the circumference of the joint: The capsule is not thickened, and there are no inflammatory changes noticeable in the skin. The effusion generally disappears quickly, and the function of the joint is not permanently disabled. Recovery is usually only a matter of a few weeks. The author says that this variety has been observed only in the knee-joint.

2 and 3. The *sero-fibrinous* form and *empyema* are advanced and more intense forms of inflammation. The joint in hydrops contains a thin, almost clear, pale, yellowish-green, limped effusion. In the sero-fibrinous form the fluid becomes thicker, more viscous, and turbid. In the fluid are shreds and cloud-like masses of fleecy lymph. Turpidity increases, and finally pus is formed. Tallying with these pathological changes are corresponding alterations in the clinical symptoms. The capsule of the joint becomes thickened and swollen. The temperature of the joint is raised, manipulation and gentle movement are exquisitely painful, and swelling and redness are strikingly apparent. The massive deposit of lymph may cause eventually some adhesion in the joint, and then a more or less firm and permanent ankylosis results. The general health of the patient does not, as a rule, suffer very seriously.

4. The *phlegmonous* form is the most serious. Effusion is small in quantity, and varies from densely turbid serum to pus. Fluid as such may even be absent, the joint being filled with jelly-like masses of fibrin. The important points, pathologically, are the fierce intensity of inflammation and the extension of the process beyond the limits of the joint capsule. As a result of this extension the capsule and its surroundings are fused and soldered into one turgid inflammatory mass. The skin is red, tense, shining, and œdematous. The contour of the joint fades gradually away. The symptoms are exquisitely defined. Pain is agon-

izing, even to torture; the tenderness is excruciating, even the pressure of the bed-clothes cannot be borne, and the mere suggestion of movement is intolerable. Muscular wasting is unusually rapid and severe. The disorganization of the joint may become riotous, and within two or three weeks dislocation may occur. When the process subsides the massive flakes of lymph become organized into adhesions which hamper or prevent the movements of the joint. In the knee-joint there is a striking tendency for the patella to fuse with the lower end of the femur. The rapidity and completeness with which this ankylosis can occur in gonorrhœal arthritis is quite characteristic. In this form, in spite of appearances, abscess formation is most unusual. The severity of the symptoms and the extent and intensity of the pathological processes are liable to considerable variation. It is not uncommon for the acute condition gradually to subside and to merge into an exceedingly chronic condition.

It is not unusual for the joint affections of gonorrhœa to appear in some such manner as this: several joints are—simultaneously or almost so—affected with aching, boring pains, and difficulty of movement with slight limitation. No obvious physical change is anywhere present. These “flying” pains, irregular in appearance, sudden in onset, and seemingly capricious and irresponsible, vanish, and one joint becomes then more acutely affected with one of the varieties of inflammation above described. In the latter stages of gonorrhœa, when the “gleet” stage has been reached and the discharge is almost gone, there may be any of the joint affections peculiar to gonorrhœa. But in this stage it is most usual to find two or more joints affected with, in each, a different intensity of the inflammatory process. The disease is, in fact, polymorphous. One joint may be in a condition of hydrops, another may be affected with the phlegmonous form of inflammation, and so on. It is worthy of note that it is especially in this later stage of gonorrhœa that inflammations of the serous membranes, *e.g.*, pericarditis, pleurisy, etc., are liable to develop. As a general rule, however, the joint affections at this time are of a mixed type, but are long protracted.

As regards *treatment*, Moynihan advises rest at first, but, owing to the great tendency to ankylosis, the rest must not be too prolonged. Internally he has had good results from mercury and the iodides. If the joint is very tense and the pain acute, relief is obtained by incision and antiseptic flushing.

An examination of reported cases shows that the lower extremity is affected about twice as often as the upper. The knee is most often attacked, then the hip and elbow. In twenty-seven cases in which the fluid was examined gonococci were only found in eight; hence the infection is probably a mixed one.—*Treatment.*

An Early Sign of Pregnancy.

Braun-Fernwald (Wien. klin. Woch. March 9, 1899), while discussing the early signs of pregnancy, refers to the well-recognized fact of the change of consistency of the uterus. He has also observed a significant difference in the anterior-posterior diameter of the uterine body. This thickening is usually located upon one side. This enlargement corresponds to the position of the ovum. This also brings into tactile prominence a sort of central groove in the corpora. He explains this condition by calling attention to the rarity of the central attachment of the ovum and the early growth of which nearly always takes place in or near one of the other of the cornui. Observation has convinced him that this sign is more constant and confirmatory than any other one of the signs or symptoms of pregnancy described. He was able to confirm the greater majority of his diagnoses by subsequent observation of the cases. In cases of abortion in which the ovum has been expelled, he found the central groove of the lateral thickening absent. On the other hand, if the ovum was still attached, he found both signs to obtain. He looks upon this as a very certain and important diagnostic. He also believes that cases of extra-uterine gestation which present the ordinary signs of pregnancy are discoverable by the absence of the central groove and the lateral thickening of the corpora uteri.—*Bulletin, of Cleveland Hospital.*

Diffuse Gonococcal Peritonitis.

Muscattello (Il Policlinico, August 15, 1899) reports the case of a woman, aged forty-eight, admitted into hospital March 16, 1899, with a history of gonorrhœa acquired twenty-five years previously, and persisting more or less since with periods of quiescence and of exacerbation. For the last twenty days, and without any definite cause, the patient had suffered severe pains in the pubic and right iliac region, accompanied by fever. On examination *per vaginam* pyosalpinx with parametritis was diagnosed, and the pus was let out *per vaginam* on March 19. Three hours after the operation great restlessness and pain in the hypogastric region, severe collapse, cold

sweats, and vomiting occurred. March 20 the collapse continued, but there was no tympanites. March 21 laparotomy was performed, and a considerable quantity of yellow, inodorous, seropurulent fluid let out. The intestines were distended and non-adherent. Part of the distended ileum was drawn into the upper part of the wound, and opened so as to let out some of its contents. The patient never rallied, and died shortly afterwards. No post-mortem examination was allowed. Bacteriological examination of the pus in the pyosalpinx and in the peritoneal cavity showed the presence of gonococci.—*Treatment.*

Cases of Intractable Syphilis.

Fournier (Ann. de Derm. et de Syph., July, 1899) reports the case of a woman who, two years and a half previously, had contracted syphilis from her husband. During the whole of that period she had suffered from severe syphilitic symptoms, notwithstanding the most varied treatment—mercury, iodide, iron, etc. He also refers to a similarly obstinate case in a man. The mercury in both was used in every possible way—by mouth, by inunction, and by intramuscular injection. An interesting feature about both was the fact that the woman had had forty calomel injections, and the man no fewer than 120, without any curative effect up to date, demonstrating most clearly how little foundation there is in the dogmatic statements put forward by some observers that syphilis could not resist calomel injection. In the case of the woman, her mother had died of phthisis, and her father from absinth—facts which might to some extent explain the want of success; but Fournier states that he has come across similarly obstinate cases in which there was no such history, and which could not be explained. He obtained a certain amount of benefit from serum injections.—*Treatment.*

Havana's Vital Statistics.

A report on the vital statistics of Havana for the year 1899, compiled by Major Davis, chief sanitary officer, shows 8153 deaths from all causes in an estimated population of 220,000. Of these deaths 1163 were from enteritis and 1367 from tuberculosis. There were but 103 deaths from yellow fever. Eleven deaths were due to leprosy. The number of contagious and infectious diseases reported was 6442, of which 284 were yellow fever. There were recorded during the year 4181 births, of which 1516 were illegitimate.—*Medical News.*

Intense Heat in the Southern Hemisphere.

At Buenos Ayres on Saturday and Sunday last the thermometer registered 120 degs. F. in the shade nearly all day. On Saturday there were one hundred and two cases of sunstroke, of which ninety-three were fatal, and on Sunday there were two hundred and nineteen cases, of which one hundred and thirty-four were fatal. In Melbourne, as we noted last week, the weather has been extremely hot, and in South Africa the British troops have suffered exceedingly from the unbearably high temperature. Indeed, the entire globe appears to be warmer than usual, for the winter in this country has been far from severe, in the Klondyke the weather is reported to have been almost mild, and at Davos Platz the season has been ruined by the warm weather, which has turned the snow into slush and has housebound all the guests with pulmonary and bronchial affections.—*Medical Record*.

The omnipresent and iconoclastic bacteriologist is again on the warpath. The most sacred of institutions and customs seem not to be exempt from his assaults. Recently a health officer in Turin, Italy, has made an examination of the holy water provided in the cathedrals of that town. He finds them badly contaminated; as many as thirty-eight species of bacteria in a single repository. It is stated that the water is renewed in these places and it is rare that they are cleansed. It is the opinion of the health officer that they may be an important means of communicating disease. He therefore recommends a weekly washing and the addition of some disinfectant to the water.—*Medical Review*.

Smallpox is spreading in Oklahoma, and it has been necessary to close the post-offices in several towns because of it. In the northwest also the disease prevails, and friction has arisen between the authorities in British Columbia and those in Washington over the disinfection of the mails from Spokane. It is reported from Louisville that smallpox is prevalent in about thirty-five counties of Kentucky, and the State board of health finds itself without the necessary means to fight the disease. The secretary has received the resignations of the county boards of health in at least a dozen counties in which the disease is the most serious, the cause of the resignations in all cases being the inability to fight the disease owing to a lack of money. The

protection afforded by vaccination is emphasized by the report of the Connecticut State board of health recently issued. According to this report there were but three cases of smallpox in the State in 1899, and one of these was that of a patient who went to Stamford from this city after assisting in the care of a case here. Dr. Lindsley, secretary of the State board of health, attributes this immunity to the thorough manner in which vaccination has been done in the public schools, and so the wise and effective legislation which permits the exclusion of unvaccinated pupils from the schools.—*Medical Record*.

Local Anesthesia.

A. E. Baker (Lancet, Jan. 20, 1900) reports 53 cases, including radical cure of hernia, resection of intestine, gastro-enterostomy, goiter, wiring of patella, etc., in which local anesthesia by means of 1 to 1000 eucaïne B. in normal salt solution was used. For some patients as much as six ounces of this solution were used, with no ill effect. There is no interference with primary union. Children and timid adults are not adapted to its use, for they are frightened by the surgical surroundings. Acutely inflamed areas cannot be rendered entirely anesthetic. Dragging the mesentery causes a sense of pressure or griping.—*Medical News*.

Experimental Reproduction of Chancroid In Monkeys.

Charles Nicolle, in La Presse Medicale of November 4, 1899, says that since the days of Hunter it has been believed that the chancroidal disease was confined to the human. Successful inoculations were reported by Turrenne and by Waltz in 1850, but these have been disputed. The writer regards the bacillus discovered in 1889 by Ducrey as the cause of the chancroidal disease. It was discovered accidentally by Unna in 1892. The bacillus is immobile, without spores, and does not stain by Gram's method. It is generally found in chains, and is properly classed as a streptobacillus. The experiments upon animals ordinarily used for bacteriological were entirely without results, but upon monkeys a characteristic ulcer was produced which could be inoculated in other parts of the same animal and from one animal to another, producing each time the characteristic appearance of the chancroidal disease.—*Medicine*.

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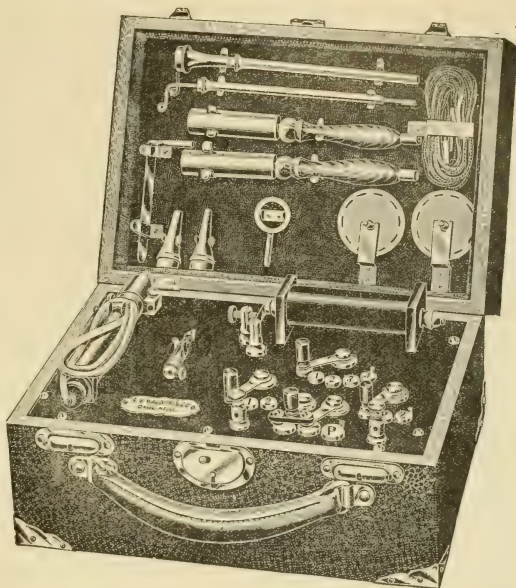
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He uses very fine catgut, which, after immersion in sulphuric ether, is subjected to 140-150 deg. [264-312 deg. F.] in the oven, then preserved either dry or in 95 per cent. alcohol.

The method of its application is as follows:

The operation being concluded and hemostasis assured, the deep sutures are inserted as usual, then the tegumentary wound is closed by a continuous suture which traverses the subcutaneous tissue without involving the skin. A knot is tied in one end of the catgut to hold it, the other end is run through the next to the last loop. We thus obtain a marked coaptation of the edges of the wound, which it is well to reinforce by strips of adhesive plaster, two inches long by one-fifth inch wide, which are applied about one inch apart. The wound is now covered for its whole length with a thin layer of cotton or gauze, which is rendered impermeable by rubber dissolved in benzine with some ether added; on drying this forms a perfect occlusive dressing. There is no need of any other

dressing, and it is only in case where we fear hemorrhages that an elastic bandage is placed above the rubber dressing, but is removed in a few hours.—*Railway Surgeon.*

The religious papers have so steadily for many years been the chief field of exploitation for patent medicines and quack cures that it is with genuine pleasure that we chronicle the fact that the Christian Herald announces with the new year the adoption of the policy of refusing advertisements for "medical" articles. All honor to the notable exception of a religious paper that through motives of high-minded honesty refuses revenue from advertisements intended to delude its readers. It is gratifying to the profession to find instances of good results from the long-continued and apparently hopeless campaign of education that it has steadily carried on against humbugs sailing under the false colors of relieving human suffering. One by one the respectable papers see that "medical" ads are necessarily misleading, because against nature and science. They see too, at last, that we are not selfish when we oppose the unreasoning self-medication fostered by the patent-medicine makers.—*Cleveland Journal of Medicine.*

A New Method for Anesthetizing in the Knee-chest Position.

C. A. Penrose, in the Johns Hopkins Hospital Bulletin for November, 1899, says that the importance of the knee-chest position in the surgery of the bladder and rectum is so well established that it calls for no emphasis. No other position allows of such complete distention of these organs, nor so great facility in their examination or typical treatment. In this position the entire mucous membrane of both bladder and rectum may be explored. Anesthesia in the knee-chest position is attended with some difficulty and not a little danger. He has contrived a holder which consists of two upright padded pieces and a strip which encircles each thigh, the knee and legs resting upon two horizontal padded cushions with straps passing around the calves. The shoulders are supported by two curved uprights in such a way as to pass across the upper part of the shoulder and under the arms as they hang forward. Between these is a cushioned shelf, upon which the cheek rests with the head turned sidewise. By means of a ratchet and chain the distance between the knee and shoulder-pieces is lengthened to correspond with the different lengths of body of different patients, and the required height of the pelvis in different operations.—*Medicine*.

Koplik's Sign in Measles.

This sign is only of value as it appears on the buccal mucous membrane (the inner surface of the cheeks and lips). Any signs, spots or appearances on the hard and soft palate, the pillars of the fauces, the conjunctiva, are of no value and rather misleading, for signs and spots exactly similar to those described on the hard and soft palate and pillars of the fauces appear not only in measles, but also in rotheln, scarlatina and grippe and simple sore throat. The buccal spots as described by me appear only in measles, and in none of the exanthemata, and to my positive knowledge in no other known disease of the mouth or any constitutional affection. They must be looked for in a very strong daylight. They must be seen in the discrete state, that is, small, irregular, rose-colored spots, with a very minute bluish-white speck, just large enough to be visible in the center of the rose area. Patches or yellowish specks must be excluded. We study the buccal membrane by everting it toward the light with the finger or a depressor. We observe the inner surface of the lips also.

In my first paper I called attention to the great value of this sign in distinguishing

between measles and cases of rotheln or rubella. Since then I have studied this very important part of the question faithfully in many hundreds of cases of rotheln in what might be called small local outbreaks of the disease.

I have become impressed with the fact that this buccal sign is valuable in aiding us by *its absence* to make a diagnosis of rotheln. Many cases of rotheln in a recent series of cases here in New York in my clinical and private practice have resembled measles so closely that practitioners studying with me have at first pronounced them true measles. We have taken great pains to study all these cases, and I have found that they were classical rotheln. The exanthema disappeared in two or three days, leaving no pigmentation or disquamation. The fever, at first 102 deg. rapidly subsided to the normal. There were no sequelæ, no complications. They corresponded in every way to the descriptions of Thomas. In all such cases the measles spots were *invariably absent*. In some of my own families subsequently cases of rotheln cropped out among the other children. Here, as in the first cases, the spots were absent. The identity of the affection was thus proven. The value of the sign in excluding measles is apparent. It proved to me also that rotheln is a disease *sui generis*, distinct from measles. I have lately had several cases of undoubted rotheln in adults contracted from children, the adults and children being in one case in the same family. In both adults and children the spots were absent. I suspect that many cases of other observers of so-called measles, in which the "spots" were absent, have been aggravated cases of rubella or rotheln.—Koplik in *Maryland Med. Magazine*.

The Presence of Microbes in the Intestinal Mucosa of Nurslings.

(La Presse Medicale). Examination of animals immediately after death has shown that the normal intestinal mucosa does not contain any microbes. It is even rare to find them in the mouths of Lieberkuhn's glands, and then only in the large intestine. But when an enteritis had been induced by the ingestion of arsenious acid, bacteria were found in the walls of the intestine.

Eleven cases of gastro-enteritis in infants were studied clinically and post-mortem. Acute forms of the disease (choleric form and ulcerative), as well as primary and secondary chronic varieties were represented. Microbes were found in the intestinal walls of seven cases, and were absent

in four. There was no relation between the clinical and anatomical variety of gastro-enteritis and the presence or absence of bacteria. The lower portions of the digestive tract contain more organisms than the upper; in fact, it is rare to find any in the walls of the duodenum and jejunum, and then only bacilli, while the cocci penetrate both the ileum and the colon. The microbes are found at the openings of one glands, where they are most numerous, in the interglandular spaces, and in the solitary follicles. None were seen in the muscularis mucosæ nor in the blood-vessels.

In the ordinary gastro-enteritis of babies, the lesions are due to the action of chemical substances taken in with the food, or elaborated within the digestive tube. The lesions so produced serve as points of entrance for bacteria, and these in turn cause further pathological changes, or even septicæmia. This point of view explains the inconstancy of the bacterial findings in cases of gastro-enteritis, and also the disproportion between the severity of the symptoms and the lesions in many cases, especially of the catarrhal form. It is quite possible that in these the poisons are absorbed and act so rapidly that death occurs before any deep lesions of the intestinal mucosa have time to be produced,—*Archives of Pediatrics*.

Serum in the Treatment of Malignant Syphilis.

Augagneur, in the *Annales de Dermatologie et de Syphiligraphie*, 1899, p. 433, describes certain cases of malignant syphilis which did not yield to syphilitic treatment. In two of these cases complete recovery was secured by the injection of Hayem's artificial serum. One of these patients presented, two months after the initial lesion, a papillary eruption, with grave disturbances of the general health, emaciation, weakness, loss of appetite, diarrhea, articular pains, and an evening rise of temperature. All of these symptoms were aggravated by mercurial treatment. There was injected under the skin a solution composed of seven parts of chloride of sodium, two parts of crystallized disodic phosphate, one thousand parts of water. The injections were given every eight days, and were followed by polyuria, disappearance of the general symptoms, and complete recovery from the skin eruption. The second patient was suffering from tertiary involvement of the nose and mouth and tubercular ulcers of the trunk and extremities. There was little improvement with the mixed treatment, but similar injections

employed as in the first patient resulted in a marked amelioration at the fourth injection.—*Medicine*.

Food Preservation. Adulteration, and Dyeing.

It scarcely needed the last Congressional investigation to show that the quantity of food adulteration has grown to enormous proportions in this country. Preservatives for foods are almost as ancient as the human race. Down to comparatively modern times, salt, sugar, smoking, and drying were the principal substances and means employed for the preservation of foods. The advent of canning, depending as it does upon the exclusion of the microorganisms of decay, furnished a marked advance upon more primitive methods, as by this means foods can be preserved an indefinite time without a loss of palatableness or nutritive value. If things had stopped at this particular point no complaint could be made of food preservation, but unfortunately, in the effort to attain cheapness in these products, chemical disinfectants have been more or less employed. There is a wide difference of opinion as to the extent to which these may be used without causing disturbances of digestion or other deleterious effects. Some writers claim that the amount of boric acid used in the preservation of food is never sufficient to have a bad effect upon the system, but others claim that such is not the case. A recent writer in the *Lancet* had studied the milk supply in London in reference to the use of preservatives. He attributes much of the mortality among infants, especially during the summer months, to the practice which prevails in systematically treating milk with antiseptics. Boric acid is the least deleterious of these, while formalin is probably the most harmful.

These evils have grown to such proportions that it is important for the various States to take action in the premises. The United States Government should pass an act which shall reach these evils so far as they relate to interstate commerce. If antiseptics are used to preserve foods, they should be so labelled; likewise, if coloring matter or other ingredients are added to foods, these should also be stated. It is said that the ordinary white cherry of commerce cannot be sold when preserved unless it is colored a brilliant red. Some people have a fondness for extra-green pickles, others for bright golden-yellow butter, cheese, etc. There is no reason why this taste should be infringed upon, but for those who do not care for coloring matters

in their foods it would be well to have the colored foods labelled so that they can be avoided. Adulterants which are harmful should be prohibited, and those which are not should be correctly labeled. A mixture of pepper and ground crackers should no longer masquerade as "pure pepper," nor should "wheat flour" as a label be made to cover one-third white corn-meal and two-thirds flour. These are simply means of obtaining money under false pretenses, and as such should be prevented. From a public health standpoint there is no harm in selling ground crackers and pepper together, but it is a fraud on the consumer not to have it stated upon the label. Justice would be promoted, fraud prevented, and the public health immensely served by having all our food products correctly labeled. This should also apply to proprietary medicines.—*Medicine*.

Carcinoma of Ascending Colon.

W. McA. Eccles (Brit. Med. Jour., Jan. 13, 1900,) records two cases of carcinoma in this comparatively rare site. The first case entered the hospital suffering from acute intestinal obstruction. A median exploratory incision revealed an annular carcinoma of the ascending colon. Through an incision in the linea semilunaris the growth was excised and an artificial anus established in the wound. Death resulted from shock. In the second patient a movable tumor was felt in the right side. The growth and considerable colon on each side of it were lifted out into the abdomen and prevented from slipping back by sutures placed in the deeper parts of the wound, which was then partially closed, sterile dressings applied, and the patient returned to bed. Fecal circulation continued through the extra-abdominal colon without difficulty. On the eighth day, without an anesthetic, the growth was excised and end-to-end anastomosis done, extraperitoneally. The gut healed and gradually retracted into the original wound, and recovery occurred without incident. Success in colectomy depends upon operating before acute obstruction occurs. When there is sufficient mobility, eventration followed by later excision is the safest procedure. If there is acute obstruction, eventration with formation of an artificial anus relieves the immediate symptoms and avoids adding the shock of colectomy to that of the obstruction. The growth can be excised at any later time without an anesthetic. Where the growth is fixed to the parietes, the best procedure is to carry the fecal circulation around it by an ileocolic anastomosis.—*Medical News*.

The Influenza Throat.

Flemming Phillips (British Medical Journal, November 1, 1899).—Attention is called in this article to a sign of influenza and its sequels, which, from a diagnostic point, deserves almost to be called pathognomonic. It consists of a congestion and increased redness of the greater part or the whole of the faucial arch, including the uvula and the posterior part of the soft palate. Not infrequently arborescent venules are plainly visible about the base of the uvula. The feature, however, which the writer claims distinguishes it from all other "sore" throats, is a narrow patch of superficial ulceration on the sides of both anterior pillars of the fauces and resulting from the desquamation of the epithelium during the acute attack. The chronic stage is the one most generally encountered, and the denuded surfaces will have a more or less granular appearance. This appearance is not at all an ephemeral feature of acute "grip," but is present for months or years after the attack. It is most persistent in character. The lesion of the throat is painless except when the ulcers or chronic congestion becomes infected. The ulceration may exist for years without its presence being suspected, and it is discovered only by the feeling of discomfort induced by infective inflammation. It is stated that in these inflammatory exacerbations of the throat the mouth temperature may be considerably elevated and the axillary temperature will not be changed. In one instance the temperature of the mouth was 102.5 deg. F., and the axillary was 97.5 deg. F. The author's conclusions are based on the study of five hundred cases, and he states that the characteristic lesions almost universally follow attacks of influenza, and even its mild and ambulatory forms.

The Effect of Cold on Micro-Organisms.

Prudden has shown that a temperature many degrees below the freezing-point is ineffectual in destroying the typhoid bacillus, but now it has been shown that no known degree of cold will destroy these and some other pathogenic microbes. A paper was read last week before the Royal Society in London, in which a number of startling experiments by Professors Dewar and MacFadyen and Sir James Creighton Browne were reported. In these experiments typhoid, cholera, diphtheria, and other pathogenic bacteria were submitted for twenty hours to the temperature of liquid air (−310 deg. F.,) and were shown later by culture tests to be still alive.—*Medical Record*.

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Genius and Inebriety.

Dr. A. S. Ashmead, of New York, sends us the following illustrative case: R. A., a tall, well-built man, with classical features, finely dressed, an engraver by profession. He had studied in Paris, and after long travel, decided that his life work was to paint the head of Christ. He gave ten years steady labor to this one subject. The picture was life size. From this he made an engraving on steel. On this engraving he has spent fifteen years, and is still unable to please himself, and continues to correct and change it. He was offered \$10,000 for the painting, but declined. Having exhausted his means, he is obliged to support himself by portrait painting. In the interval he continues his work on the portrait and plate. During all these years he has had long periods of alcoholic excesses in which he would drink to great stupor, lose his mind, and be taken to the hospital. On recovery, his ideal became more intense than ever. He would go back to work with more energy and concentrativeness, sometimes repainting and altering some features or painting new faces, which seemed nearer the ideal. His wife secured a divorce, and he sunk lower, taking up with an abandoned woman, losing all interest in everything but the one ambition. He will not sell this picture or the plate, and he continues to work at them, saying that in the future they will become monuments of his fame.

Case 2. W. B., for many years the actuary of a life insurance company, a man of great mathematical ability and intelligence. Suddenly he drank to great excess, and only recovered when forced to it. He had a very active brain, was a disciple of Herbert Spencer, and reasoned out all the problems of life on the broadest fields of philosophy. His drink periods were the most insane and imbecile in every particular, and, on recovery, his old intellectual vigor returned. The only weakness he displayed was carrying about with him many pairs of evening gloves, representing the colors of the rainbow, which he wore at intervals without explaining the reason. He was forced to resign his business, and spent his time as a student of the higher philosophies. He only drank on the receipt of his quarterly annuity. When this was withheld he continued sober. But when he could get any money the craze for drink was overpowering. He continued his philosophic studies for several years. Was abandoned by his family, and finally was picked up in the street of a Western city, and taken to the hospital, where he died.—*Quarterly Journal of Inebriety*.

Chicago Filth is St. Louis' Drink.

For some weeks Chicago has been emptying her filth into a drainage canal built at a cost of \$33,000,000, emptying into the Illinois River at Joliet, Ill. This filth flows down the Illinois River and empties into the Mississippi just above Alton, Ill. The water supply of St. Louis is received from the Mississippi River a few miles below Alton. As Chicago's filth flows down toward the Mississippi it becomes, of course, more or less diluted, so that the water supply of St. Louis becomes a solution of Chicago sewage. St. Louis and Alton have just passed through a typhoid fever epidemic which has been traced, to the satisfaction of the health authorities, directly to the drinking of this diluted filth. Chicago claims that if 300,000 cubic feet of pure Lake Michigan water is forced through her drainage canal per minute, the dilution will become so great as to "purify" her sewage and render it drinkable, so that instead of one typhoid fever germ to each drink there would be but one such germ to each hundred drinks, so to speak. In other words, we are only liable to typhoid fever once in a hundred drinks. Filtering will do some good, perhaps, but it will be hard to convince the medical profession outside of Chicago that the typhoid germ is big enough to get entangled in the filter stone. All drinking water in St. Louis and all cities between St. Louis and Joliet, Ill., should be boiled, or distilled before use. Boiling is inconvenient, and it will be hard work to get the general public to adopt this measure. Crystal water can be bought for drinking purposes, and is without the flat, "lifeless" taste of boiled water, and should come into general use.—*The Regular Medical Visitor*,

Another patent medicine has gone by the board. This time it is St. Jacob's Oil—so-called. The company that made it has gone into bankruptcy with liabilities stated to be \$200,000, probably more than less; and assets of \$150,000, probably less than more. Not many years since it was difficult in the country districts to find a bare rock or a fence that was not plastered with advertisements of this much-vaunted cure for rheumatism. But the public by experience found the difference between claims and results, and the end has come. Few patent medicines live beyond a short term of years. Extended experience shows the falsity of the claims upon which they are sold, and suggestion, while powerful in influencing public opinion, does not seem to have lasting effects.—*Cleveland Journal of Medicine*.

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The Uses of Saline Infusion.

Georgii (*Munch. Med. Woch.*,) 1899, Nos. 27, 28), who has used subcutaneous infusion of salt solution in many cases, urges its value and practicability not only in hæmorrhage, but in various other morbid conditions. Intravenous injection is too difficult to be generally adopted in general practice, and is not free from danger; but it is time that practitioners should cease to have any fear of a proceeding which, except for the size of the hollow needle, differs but little from hypodermic injection with a Pravaz syringe, requires no special apparatus and no assistant, and with reasonable antiseptic care is quite free from danger. Its effect is just the same, if not so immediate, as intravenous infusion, and the delay is hardly greater than the time necessary for preparations and introducing the canula into the vein. It is indicated by acute anæmia, especially in the third stage of labor, but also as a prophylactic in placenta prævia, when it renders narcosis and turning easier, and the unavoidable exposure to cold during that operation less dangerous; in acute internal hæmorrhage from liver or spleen, or from gastric or duodenal ulcers; in the hæmorrhage of typhoid, and that due to the abortion of rupture of tubal pregnancy. In such case intravenous infusion has been feared lest the restoration of blood pressure should cause renewed bleeding or overtax the heart; but the absorption from the cellular tissue is a slower process and if no other powerful stimulant be given, the salt solution may be injected in quantities of 100 c.c. to 200 c.c., at intervals of from ten to fifteen minutes. It is indicated also in all gynæcological and surgical operations on patients who have lost much blood, if further bleeding may be expected, and especially so if arrest of hæmorrhage is an essential point in such operation. Its use in recent cholera epidemics is well known in restoring the circulation, supplying warmth, and preventing the drying-up of the tissues. In acute and chronic diarrhœa, in the gastroenteritis of adults, and the cholera nostras of children, Georgii has found it of great benefit. In marasmus due to chronic intestinal trouble he recommends the addition of 3 per cent. of sugar to the normal salt solution. In cases of intoxication—for example, from strychnine, CO, CO₂, chlorate of potash, mine and illuminating gas, boric acid, iodoform, nitro-benzol or carbolic acid—it dilutes the poison in the blood, and promotes elimination; but depletion venesection should precede it, and so also in uræmia and puerperal eclampsia.

In phosphorus-poisoning turpentine-water may be added to the solution. Other means should not be neglected—a low position of the head, hot clothes and bottles and drinks, perhaps artificial respiration; an injection of camphor in ether is a useful preliminary. Abscesses cannot be invariably avoided, and gangrene from over-extension of the anæmic skin has been met with, but no accident dangerous to life, or to be compared with the benefit to be derived. For children and small injections a syringe of 50 c.c. will suffice; otherwise a hollow needle, enough indiarubber tube to give a fall of 5 feet to 7 feet, a glass funnel or irrigator, salt, and boiled or distilled water at 40 deg. C. The injections may be made below the clavicle, under the skin of the abdomen, or outer side of the thighs. The back is unsuitable, as turning the patient over is inconvenient.—*Treatment*,

A man ninety-one years of age, a farmer, living out of doors, and working moderately, is reported as an example of the harmlessness of the continuous use of pure whisky. He has drank a pint of spirits daily for sixty years, and is apparently hale and hearty, never having had any illness. His example has been quoted freely in several of the liquor journals, and by the defenders of moderate drinking. In a letter of inquiry from a physician living in the vicinity, the following facts were given: The man was of inferior intelligence, with a large physical frame, and inclined to follow very methodical habits of living. While the effects of his drinking were not prominent in his appearance, they were evident in his children. Of three children by his first wife, two died in infancy. One became an epileptic, and died at fifteen. Of four children by his second wife, one is feeble minded, the second choreic, the third is dissolute and drinks, the fourth is erratic, passionate, and a wanderer. All are decidedly inferior both physically and mentally.—*Quarterly Journal of Inebriety*.

A scientific study of the results of hangings has been begun under the auspices of Jefferson Medical College. In the case of a murderer hanged recently in Philadelphia it was found that death had not resulted from either fracture of the vertebræ or asphyxia, but from traumatism of the structures of the neck, which was much lacerated. The crystalline lens was intact. Life persisted for eighteen minutes after the falling of the drop, although it is thought consciousness was lost at once.—*Medical Record*.

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The Antivivisection Fad.

This seems to be essentially the age of fads and of faddists. To an intelligent person each one appears to be more ridiculous than its predecessor. A fad of comparatively recent date, which numbers thousands among its followers, is Christian Science. It has proven very profitable to its inventor, who has cleared many thousands of dollars through the sales of books and paid lectures. This science (?) has among its followers (and they are in a majority) corn-fed female philosophers and long-haired male nincompoops. It has succeeded in murdering so many innocents that it is but a question of a short time before the law will assert itself for the protection of the misguided and ignorant. A more modern fad is osteopathy. Like Artemus Ward's kangaroo, it is a "amoosin' little critter." It is so amusing that it is even hilarious. We cannot understand how the profession ever took the matter seriously. The reduction of imaginary dislocations has acted well on imaginary patients and the massage has done no harm. The disciples of this cult employ no medicine, and it is in this feature alone that it is good. The whole thing is an error, and if left to grope in its own darkness it will soon be lost in that complete caliginosity which swallows all things dependent upon obscurity. As in other cases which have occurred before the regular medical profession have given these people that prominence which they sought and thus make them known, where otherwise they would have sunk back into deserved oblivion.

That to which we more particularly desire to call attention is a peculiar sentimental obliquity, characterized more by hysteria than by good sense. Whilst we characterize it as a fad, others have been less charitable and call it craze. What we refer to is the antivivisection spasm. A number of hysteric women and milksop males combine themselves into a high court, and emit spasms in the form of resolutions on a subject concerning which they know absolutely nothing. They spend hours mouthing and denouncing something purely imaginary. They construct their little straw men and then gleefully proceed to knock the stuffing out of them. The whole movement has been conceived in iniquity and brought forth in darkness; but the petticoat contingent has been strong in spreading the tirades and misrepresentations upon which the flimsy superstructure of antivivisection wobbles. It has been said that nothing could thrive on error; yet, here is a shining example. It not only thrives but fattens. It is true that it gains

no strength; nor can it, for such cannot be given to a gelatinous spine. Antivivisection is an appanage of a "refined" persons not of the intelligent classes. Pity 'tis that it seems impossible to make truth a necessary part of the self-deception produced by the intellectually weak upholders of this end-of-the-century delusion.

The greatest strength exercised by these psychologic degenerates has been made manifest in England, where freedom is supreme according to the boastful pretensions of our trans-Atlantic cousins. By parliamentary enactment vivisection experiments are not permitted to be made in the British isles. The result is that Englishmen cross the channel and do their work in Paris. Such men as Ferrier and others who have made some of the grandest discoveries in medicine, are compelled to depend upon the generosity of a hereditary foe to be enabled to do good to humanity. But that is the argument of the antivivisectionists—better a thousand human beings suffer and die than one poodle be made useful in the cause of true humanity. For be it remembered that vivisectionists are brutal butchers who delight in torturing meek, brown-eyed dogs, etc., and only desire to tear innocent brutes limb from limb and dance about in fiendish glee at sight of the tortures they so delight to inflict. It is actually nauseating to read the twaddle published in their official organs. They make themselves supremely ridiculous in their hyperesthetically distorted images of a pervert imagination and simply disgust those who know what vivisection is in reality. They deliberately distort facts, deny the truth, and display an amount of childish ignorance which would be amusing were it not for the fact that the consequences might become actually injurious to all progress.

The dawn of a new century is upon us and we are encouraged to hope that its light will throw such strong effulgence as to drive away and disperse the fogs which have been called up by the benighted intellects of fad-ridden imbeciles.—*St. Louis Medical Journal*.

If you have a patient who is likely to have to stay in bed for some time, see that he will be able to see the light while lying in the most comfortable position. Sick people naturally turn towards the light, and may be made very uncomfortable by neglect of this simple measure.—*International Journal of Surgery*.

Absolute permanent baldness following the administration of a quarter of a grain of thallium is reported by Jeanselme.

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Air or "Contact" Infection.

A recent writer has been studying air infection. His experimental work shows that infection from the air, due to minute particles of dust or moisture conveying bacteria, is possible. There was really no need of such an experimental investigation. Every bacteriologist well understands that unless care is exercised, plate cultures, bouillon, and other material may be infected by the air.

In the controversy over spontaneous generation twenty years ago, Tyndall conclusively showed that air confined in a box which was allowed to stand some time, in which the dust particles had settled to the bottom, adhering to glycerin which was smeared over the bottom, was absolutely sterile. Bouillon or other organic solution could be exposed for weeks to such an atmosphere without the slightest decomposition. Naturally these early experiments dealt largely with the floating organisms of the air, and they impressed observers with the importance of air as a source of infection of wounds. After a time surgeons got away from this view and came to the conclusion that so far as wound infection was concerned, it rarely occurred from the atmosphere, though the possibility of such infection has never been denied. Practically all surgical infection is contact infection, either from the skin, the instruments, dressings, or any foreign body that may be brought in contact with the tissues.

The late experiments of Flugge, to which we refer, again call attention to the possibility of air infection, and he says that it is wrong to attribute so much infection, as we commonly do, to a defect in sterilizing the skin. Hence his recommendation that the beard, hair, mouth, and nose of operators and assistants should be carefully protected, as in the act of coughing or talking particles of moisture carrying bacteria may be easily deposited upon the wound. There can be no objection to protection of this kind, but in the judgment of the most advanced surgeons of to-day such infection is regarded as extremely rare. Biology teaches us that the cells of a part can dispose of a certain number of microorganisms, but how many we do not know; certainly in the great majority of cases the few which accidentally fall upon the wound from the atmosphere are easily taken care of in this way. Undoubtedly there is a great difference in the virulence of microorganisms; with some a less number will infect, but there are probably few which are so malignant that in very small numbers they may not be cared for by the tissues. In contact infection, however, there are invariably conveyed to

the part an enormous number of organisms. A single sebaceous follicle of the skin may harbor millions of these organisms. Notwithstanding the experimental work of late years, the dictum of Billroth still remains that practically all dangerous infection is contact infection; using the term "contact" as distinguishing between infection through air and the actual application of a foreign body.—*Medicine.*

The Diagnostic Importance of Pupillary Changes.

Liebrecht, in the *Deutsche Medicinische Wochenschrift* for November, 1899, Nos. 25 and 26, says that a loss of the light reaction of the pupil with retained reaction to convergence is the most constant symptom of tabes. This may exist with a pupil of normal size, but usually it is somewhat smaller than normal. The failure of the light reaction is commonly on both sides, but it is occasionally unilateral. Associated with this condition is often found a difference in size of the two pupils, which is to be referred to disturbances in the sympathetic or the peripheral sensory nerves. A failure in the light reaction occurs in from 30 to 70 per cent. of all cases of tabes. Much more rare are cases of immobile pupil, and still less frequent are cases of paralysis of the sphincter muscle. This last is a frequent symptom in syphilis of the brain. In general paralysis the failure of the light reaction is even more constant than in tabes, occurring in from 50 to 90 per cent. of the cases. Myosis, which is common in tabes, is rare in general paralysis, but there is more frequently inequality or irregularity of the pupils. The rule which Charcot laid down, that reflex disturbances of the pupils are only noted in tabes and paralysis, can no longer be maintained, except as a general rule, subject to exceptions. With cerebral tumors and abscesses there is commonly no disturbance in the pupil, so long as the optic and oculomotor nerves are not involved. In meningitis of the base the pupils are contracted, unless the trunks of the nerves are involved.—*Medicine.*

While escorting a lady home the other evening, a popular doctor attempted to relieve her cough by giving her a lozenge. He told her to allow it to dissolve in her mouth. No relief was experienced. The doctor felt chagrined the next day when the lady sent him a coat button, with a note saying that he must have given her the wrong kind of lozenge, and that he might need this one.—*Cleveland Med. Gazette.*



6

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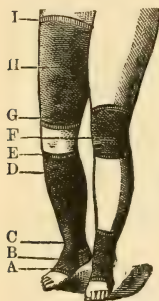
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 Nowhere to fall but off,
 Nowhere to stand but on.

Nothing to comb but hair,
 Nowhere to sleep but in bed;
 Nothing to weep but tears,
 Nothing to bury but dead.

Nothing to sing but songs,
 Ah, well, alas! alack!
 Nowhere to go but out,
 Nowhere to come but back.

Nothing to see but sights,
 Nothing to quench but thirst;
 Nothing to have but what we've got,
 Thus through life we are cursed.

Nothing to strike but a gait;
 Everything moves that goes;
 Nothing at all but common sense
 Can ever withstand these woes.
 —Ben King.

Indiscriminate Charity.

Mr. Andrew Carnegie in an after-dinner speech at the Lotus Club recently vigorously denounced the custom of indiscriminate charity. He said: "Let a multi-millionaire take his millions to the slums and call the people together, saying 'There is a wrong distribution of wealth in the world. You have not got your share. I give to each one of you his share of my millions.' Let that be done in the morning, and let the millionaire return at night to see what good his action has done, and he will find not happiness, but pandemonium. Let him distribute another million and another million every day for a month, and pauperism will increase every day. At the end of the month, seeing the result, he will wish that he could crawl and ask pardon for the harm he has done. He has done more injury in a month than he will do good in all the rest of his life. He has taught the hitherto self-respecting working family that industry leading to self-support and independence has no reward beyond almstaking, idleness and debauchery. It was this class of charities and the sums rich men give to applicants and to societies in order to be relieved of the trouble of investigation, of which I ventured to say that of every \$1,000 so bestowed \$900 had better be thrown into the sea."—*Medical News*.

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No. 3.

Report of 1371 Cases of Tuberculosis Treated in the Asheville Climate.*

By James A. Burroughs, M.D., Asheville, N. C.

My reason for reporting the above work is that my notes show conclusively that a very large per cent. of properly selected cases of tuberculosis can be arrested or cured with rational treatment in the right climate. As these patients have been intrusted to my care by physicians from every State in the Union, Province of Canada, &c., it is nothing but reasonable and correct that a resume of this work should be rendered for their consideration. In this record no case is included that has been treated since December, 1897; all the work of 1898 and 1899 is left for future compilation, as no case of tuberculosis should ever be reported as arrested without at least two years in evidence of comparative good health minus any return of the old symptoms. 123 cases treated with tuberculin and anti-tubercular serum have also been omitted from this report, as no beneficial results were observed, in some instances positive harm was done. 43 cases previously reported also omitted.

A painful fact to relate is that a little more than a fourth of the number of patients who are referred to me are hopelessly incurable because of too much destruction of lung tissue and compound systemic infection: this class is not taken under my care and are not included in this report; all such cases, for obvious reasons, are promptly advised through their regular medical attendant to return home. It is not right to waste your time with this class; it is dishonest to accept money for attention that can be of no avail, and if permitted in office will depress and disgust convalescents. It is best for these patients to return home notwithstanding any friction or mistrust that may arise.

Too much judgment cannot be displayed in selecting cases for treatment, those who improve reflect their good spirits upon others while those who do not have the opposite effect.

Points elicited by verbal examination of the 1371 cases as follows:

Heredity, - - - -	902 cases.
Acquired, - - - -	469 "
Hemorrhagic, - - -	553 "
Non-hemorrhagic, -	818 "
Malignant Heredity, -	394 "
Specific History, - -	13 "

It is useless to note that tuberculosis is never inherited, yet the peculiar soil, with little or no physical resistance of the subject, does exist; this lack of resistance is nearly three times greater from maternal than paternal side. The commonly accepted theory that hemorrhagic cases enjoy an advantage over the non-hemorrhagic is not borne out in this report.

So large a per cent. of tubercular patients having malignant ancestors is a point entirely new so far as I know, which can be accounted for only by the inherited, weakened, non-resisting cell structure, certainly no other relation between cancer and tuberculosis can exist, yet the point is sufficiently prominent to note—I have never observed cancer in a tubercular patient.

The cases of specific complication had been fairly well treated and with the continuance of occasional anti-syphilitic remedies, no special bearing on the treatment was observed. The average loss of weight 17½ lbs., aggregating a loss of 23,650 lbs. Average chest expansion 2½ inches.

PHYSICAL EXAMINATION REVEALED.

Left lung involved	543 times.
Right lung involved	492 "
Each lung involved	336 "

COMPLICATIONS.

Laryngitis - - - -	403 times.
Ulcerative laryngitis with loss of voice - - - -	78 "
Diarrhea - - - -	64 "
Pleurisy, dry - - - -	121 "
Pleurisy, with effusion - -	27 "
Empyema - - - -	19 "
Rectal Fistula - - - -	36 "
Bone Necrosis - - - -	24 "
Bronchial Catarrh - - -	223 "
Suppurative Otitis - - -	43 "
Deafness, complete or partial in one or each organ, due to previous pathological changes	51 "

Whether the right or left lung is involved has no clinical significance or bearing on

*Read before the Tri-State Medical Association of the Carolinas and Virginia, held at Charleston, S. C., February, 1900.

the prognosis so far as I have observed. It is well to note that the clinical report shows the left lung more frequently involved than the right, notwithstanding the statistics of all the authors I have examined show the right more frequently involved. Each lung being involved does not lessen the chance for arrest or recovery; the gravity of each case depends upon the amount of tissue involved with or without other infection, let the lesion be in one or both lungs.

The cases complicated with laryngitis and pharyngitis received very little attention beyond the regulation treatment which will be described at another place in this paper, however, it is well to state, every case was well saturated at bed hour with glymol impregnated with terebene and oil of pine needles, by means of a hand atomizer.

A number of the 121 cases of dry pleurisy had repeated attacks; all were treated by strapping sides and small doses of codeine, with a few day's rest in bed. It is a remarkable fact that Pepper gives 115 pages in his system of medicine to pleurisy, and not quite one page of this great work is devoted to tubercular pleurisy, notwithstanding that 98 per cent, of all pleurisy is tubercular in origin.

The 27 cases of pleurisy with effusion were promptly relieved by withdrawing the fluid and placing the chest wall at rest in adhesive straps; in several of these cases the fluid re-accumulated and the above procedure was repeated.

The 19 cases of empyema were treated by drainage tubes and antiseptic washes, followed by antiseptic oils. It is worth noting that two of these cases had cavities connecting with bronchial tubes, which had perforated the pleura-pulmonalis. In proof of the above statement, each of these patients could take deep inspirations, close mouth, with thumb and forefinger on nose, and attempt to exhale with air rushing out of hole in side; both of these cases are now under my care. neither one well nor ever will be, yet one is attending to business every day, while the other is a gentleman of leisure.

The 64 cases of diarrhea were treated with ichthyol in 5 gts. doses every two hours, and the bowels were flushed with salt solution twice daily, followed with codeine; as a matter of course easily digested food and frequently, pre-digested food, was used.

Rectal fistulae were excised in the usual manner with good results. The idea with older physicians and surgeons that rectal fistula, complicated with pulmonary tuberculosis, should never be operated upon, was an error; the idea is not tenable in cases

amenable to treatment, as all pus secreting surfaces, which form a culture media for tubercle bacilli, should be cut off to check a constant drain upon the patient.

The hip and wrist joints seem to be the selected points for bone necrosis; only six cases of hip necrosis complicated with pulmonary tuberculosis, which were treated in the usual way with fair results; wrist involved nine times, all treated by iodoform injections and free incisions; four recovered with ankylosed joints and five were amputated. It is well to note that amputation for tubercular wrists should be high above all diseased tissue or a second amputation will be necessary. Various other bones involved nine times.

The 43 complications of suppurative otitis were frequently boiled out with peroxide of hydrogen and dusted with iodoform. The greater number ceased to discharge, but in a majority of instances the hearing was impaired. Of the 51 cases where the deafness was complete or partial, due to previous pathological changes, practically no improvement in the organ was observed.

In each of the 1371 cases recorded the physical signs were borne out by microscopical examination of sputum. Observation of these cases extend over a period of fourteen years; no case is reported arrested unless patient was examined or reliable information of good health was in my possession at least two years after treatment.

Arrested or cured	-	947	cases.
Benefited	.	321	"
Not benefitted	-	72	"
Deaths	-	31	"

Of the 947 that were well at the expiration of two years, the trouble is known to have re-developed in 63 cases. Still well 542. Death from other causes and lost trace of 312, it is safe to presume that a large per cent. of this 312 escaped a re-development of their old trouble.

The 321 benefitted were only partially arrested, about one-third of the number two years after treatment were still improved.

The 72 cases not benefitted showed very little, if any, improvement after sixty days treatment, and were advised to try other climatic points or return home as each individual case suggested.

Of the 31 cases that died, only two were due to hemorrhage of the lungs, in each case brought on by imprudence or indiscretion after cessation of treatment. Sixteen of these deaths were caused by tubercular complication of kidneys, eleven due to tubercular necrosis of lung tissue.

In obtaining the above satisfactory results the treatment consisted of climate,

hygiene, diet and intra-pulmonary medication.

The health giving climate of the Asheville plateau is well known to-day to that portion of the profession who have given climatology a passing thought, yet a goodly number of physicians have given the subject very little attention, for the benefit of the latter will state that these patients have been treated in the high, dry, non-germ laden atmosphere of Asheville 2350 feet above sea level, with mountains several thousand feet higher some miles distant, completely encircling the city, thereby condensing the greater part of moisture and arresting all high currents. We have a comparatively even temperature all the year round (because of geographical surroundings, altitude and latitude) which is a great point in treating this class. In this climate sputum laden with bacilli deposited in the sun, very soon after it is dry, is robbed of all danger: animals injected with dried sputum after four hours exposure to the sun failed to develop tuberculosis. It is the exception when cattle raised here respond to the tuberculin test. The mortality of natives from tuberculosis is practically nil. It is in such a climate as this that the tubercular seem to respond more readily to treatment.

Too much care cannot be exercised in locating patients in good sunny rooms properly heated and ventilated, with bath and toilet conveniently arranged. These rooms are all sterilized with formalin gas before patient enters: when the patient departs the same room is again thoroughly sterilized in like manner.

It is in the corners and portions of room where the sun can never strike that I fear tubercular germs; it is obvious that no room can be sunned in its every portion, hence the absolute necessity of thorough sterilization. In the days previous to formalin gas sterilization, rooms were fumigated with sulphur and all the bedding, rugs &c thoroughly sunned. Every patient is required to be out in the open air several hours each day according to physical condition, this time is taken up in riding, driving or walking as may be suggested after due consideration of physical and financial conditions. Patients are taught how to breathe from the beginning; they are instructed to take many deep inhalations, fifty to two hundred, to their fullest lung capacity on the daily outings, at first they neglect these breathing exercises but by dint of persistent effort they begin to enjoy the pulmonary gymnastics, as they notice the shortness of breath decreasing they are encouraged, and frequently take

many more of the deep full inspirations than directed; this kind of pulmonary gymnastics is better than any pneumatic cabinet as it is free from the danger of infection of the cabinet, besides the collapsed air cells are more successfully forced open, the elasticity of lung tissue is increased and a better circulation is stimulated, thereby relieving old inflammatory changes, eliminating poison and giving the blood an increased amount of oxygen and increasing its red blood corpuscles. All patients are ordered sponge or plunge baths in the mornings followed by an alcohol rub; this is done for cleanliness and general tonic effect besides it renders them less likely to contract colds. Much could be said on the subject of hygiene in the treatment of these cases that is crowded out, however will state that each individual is made acquainted with the full nature of his trouble with careful instructions as how to collect, destroy or dispose of all sputum.

A strict anti-expectoration ordinance (the first in the U. S. A.) is most admirably accepted and well enforced. This Ordinance gives every one a feeling of security besides it has played no little part in the good results attained in the management of these cases.

The feeding of tubercular patients is a part of the treatment of utmost importance; no fixed rule can be laid down as to quantity, quality, or how prepared because so many cases have tubercular infection or ulceration of different portions of the alimentary tract, each case demands special attention, according to condition. Thorough assimilation of nitrogenous food is very essential in stimulating cell tissues and increasing quality and quantity of blood corpuscles, thereby augmenting physical resistance and materially aids in arresting the disease. To be able to digest and assimilate good beef steak, mutton chops, milk and eggs places the patient many points farther toward recovery. The various forms of beef can be more readily digested without tiring the stomach than any other one food. Beef steak and breakfast strip put heart into the poor consumptive just as corn puts heart into the plow horse. If by liberal feeding a uric acid condition can be established you have mastered the tubercular situation.

As a routine practice each patient is rubbed thoroughly at bed hour with pigs lard; the average patient will take up three ounces of lard after thirty minutes' application to entire surface of body. Patients who are unable at first to take very little food will actually gain strength and flesh by being fed in this way through the skin, despite

what physiologists may say to the contrary. I recall an instance of a woman who only weighed 87 pounds, her case was complicated with tubercular diarrhea, she was carefully massaged with three ounces of lard every four hours for weeks, she gained in strength with no other food except broiled scraped beef; after eighteen months treatment was discharged, cured, weighing 181 lbs; you will pardon the digression when I tell you that this woman married, became the mother of four children, contracted pneumonia and died within three months from re-occurrence of phthisis, nine years after treatment. Just such cases as this causes doubt if tuberculosis is ever cured, if anything more than arrested.

Internal medication consists of creosote (made by Morson & Son by the distillation of beechwood tar) pepto-mangan and cod liver oil; some stomachs digest a portion of whisky to advantage with undoubted benefit, especially is this true with those who are very much debilitated. All weak hearts were looked after with large doses of strychnine nitrate as indicated.

Intra-pulmonary medication has been routine practice; it is the most logical, practical and successful medium to reach the diseased tissues, and other conditions being equal, enjoys an advantage over any other auxilliary in the treatment of pulmonary tuberculosis; after years of experience, possibly pushing intra-pulmonary medication further than any other living man, am prepared to affirm that under no circumstances could I be induced to take one of this class under my care and omit this most valuable mode of local and constitutional medication; it appeals to the reason of the patient, there is something tangible, the cough is lessened, expectoration decreased, the shortness of breath is less noticeable and all the constitutional symptoms improved and hand in hand the physical examination of the chest and microscopical examination of sputum will reveal that the improvement does exist.

Intra-pulmonary medication is a simple thing, all that is necessary is an air receiver, cut-off, devilbiss spray and 50 to 80 pounds pressure as you like. Have patient to completely empty lungs of air and slowly take a deep breath as you gradually press the lever of the cut-off allowing the condensed air to force the medicine, assisted by the deep breath or inhalation, down the trachea through the bronchial tubes into the very air cells.

Creosote, menthol, oil eucalyptus, oil pine needles and oil cedar are used in glymol. It is surprising how much medicine the lungs will take up, each day approximates

1½ ounces of glymol with 15 gtts. creosote, 5 grs. menthol and 20 to 30 gtts. of the other oils are administered in this manner (in my earlier experience much larger doses of oil of cedar and pine needles were used, resulting in several miscarriages and also produced strangury more than once in the male.

The daily local treatments places the lungs in the best possible sanitary condition, the sputum is dissolved by the glymol and the creosote, and the antiseptic oils achieve their deadly work; the healthy lung tissue is left in a most favorable condition to resist any fresh points of infection.

Of the 553 hemorrhagic cases after ten days intra-pulmonary medication only 16 had hemorrhages, which is strong argument in my mind that a prompt and decided action is produced by this mode of medication; again, while taking this treatment the patients were practically free from any and all the diseases of the air passages, viz: tonsilitis, laryngitis, bronchitis or pneumonia.

It is obvious that the average gain in the 1371 cases cannot be given because of the death of 31 and the 72 not benefited. The 321 cases benefitted averaged a gain of seven pounds.

The 947 cases arrested or cured regained an average of 16 lbs. Average gain of chest expansion in the above cases was 7-8 of an increase of over one-fourth breathing space.

In conclusion, wish to emphatically state that at this writing no specific for tuberculosis is known to the medical profession, yet in the right climate with good food, scientific hygiene and intra-pulmonary medication the Angel of Death will pay his respects to the human family less frequently in the role of the great white plague.

Demand of Early Surgical Interference in Cases of Pernicious Vomiting of Pregnancy.*

J. A. Williams, M. D., Reidsville, N. C.

The one aim in my producing this paper is that I may bring forth a discussion upon the subject and thereby be the means of saving the life of some poor woman, though, it be at the expense of a fetus a few weeks old. In my experience, the cases of persistent vomiting following pregnancy are, in the majority of cases, found in

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society women, especially women who have married late in life, though, it may be found in women of all classes. When and wherever found, extreme nausea following conception should always be treated and handled with the greatest care from the beginning, and, in the end, there will be a very small per cent. requiring operation. While I have never yet had a death from such in my own practice, I have two in mind which have occurred and, I believe, might have been saved had they had an operation of curetting and emptying the uterus of its contents, and, there by, relieving the cause before exhaustion, collapse, and death.

My plan of treatment is to treat every case from the beginning as if it were pernicious and, in this way, have reduced cases for surgical interference to a very small per cent.

In all cases, I place the patient in bed and treat as follows:

I. **Dietetic**—Consisting strictly of liquid diet, such as milk, kumyss, Valentine's Beef Juice, liquid peptonoids. These should be given at first in small quantities often repeated. Small quantities of water only should be taken by mouth as this alone will excite nausea. Lime water added to milk will often be efficient. I usually give two drachms of liquid peptonoids, or two ounces of milk with lime water every two or three hours. Some will take one and others require something else. Cracked ice with champagne is beneficial in many cases.

II. **MEDICINAL**.—I usually find subnitrate of bismuth and oxalate of cerium in doses 15 to 20 grains of the former, 10 to 15 grains of the latter given every four hours with broken doses of calomel as most efficient drugs in the majority of cases. In catarrhal conditions, tincture of nucis vomica before meals and pepsin with muriatic acid after meals is of service. Bromide of Potash given per rectum in large doses often does good. Large enemata of normal salt solution is very important and should always be used, it not only washes the excreta from the bowels, but relieves thirst and frequently this alone will be sufficient to suppress the nausea.

Cocaine may be tried and is often beneficial. In my opinion, opium should never be used as the after effect will, in nearly every instance, aggravate instead of relieve emesis. There are many others, such as ingluvin, which deserve mention.

III. **LOCAL**.—Should always examine for and correct displacements if possible. If the os is ulcerated or patulous, painting it with nitrate of silver or pure carbolic acid will often be of great service in avoiding the trouble. Frequently, dilating the cer-

vix with steel dilators will often be beneficial and should always be tried as a last resort. Counter-irritants over the stomach and large injections into the bowels of two quarts daily of normal salt solution should always be tried, and, in my experience, has been very beneficial. Nutrient enemata should be used of peptonized milk or liquid peptonoids as stomach rest is often required for a few days. There are many other things deserving some credit.

However, when you have tried the above and whatever else you may suggest, faithfully and vigorously and, in time everything rejected, patient becoming pale, wasted and apathetic. You should not hesitate longer on operating.

If surgical interference is postponed until the patient is in a state of complete collapse, the shock of the procedure will not lengthen, but shorten life. If you feel a delicacy in such an undertaking, lay aside prejudice and call in someone who is skilled in surgery, for here is where medicine and surgery merge into one another and they should clasp hands and unite in relieving human suffering and saving life.

If you allow your patient to become wasted, and exhausted from lack of nourishment when the pulse becomes rapid and feeble, respirations frequent, mouth dry, and the body covered in a cold clammy perspiration—then, when the patient is dying consult for an operation, then and then alone you are to be blamed and charged with the life of another.

In this day of aseptic surgery there is comparatively little danger of artificial abortion. In my experience, the majority of these cases occur from the first to the fourth month, and, if I can carry them over the fourth month, I feel pretty safe they will carry to full term, though, there are exceptions.

I have performed the operation of curetting in order to relieve persistent vomiting in two cases. One I performed the operation the second time and the third conception she carried to full term and gave birth to a ten pound child.

The operation consists in preparation of the patients, instruments, surgeon, nurse, and assistants as you would in any other surgical operation done through the vagina. After placing the patient on the table in a dorsal position and inserting the speculum. The posterior lip of the os is grasped with the bullet forceps and the uterus drawn down, insert the steel dilators rapidly dilating the cervix three quarters to one inch, then introduce your finger (I prefer pile forceps) rupture the membranes and take away all fetus, membranes, and placenta

possible before using curette. After you have done this, using a large sharp curette, go over the entire surface of the uterus following this with a smaller one. This part of the operation should be done with the greatest care, for, unless you are familiar with the operation, you are liable to curette through the uterine wall. After you have taken away all structures possible, wash out the uterus with hot normal salt solution. Now, pack the cavity with a strip of iodoform gauze (Pryor's formula) one inch wide and one yard long. Fill the vagina with tampons of gauze placing the first behind the cervix, the next in front, and, at the same time, shoving the uterus back in place. Completely fill the vagina, packing from side to side. Place over the vulva an aseptic pad and your operation is complete.

In all these cases, I usually prefer chloroform as the after effects are much less nauseating than ether.

Before removing the patient from the table, give a rectal injection of hot salt solution of one or two quarts. If there is much shock, give one or two quarts of salt solution by transfusion into the median vein of the forearm. Place the patient in a warm bed with plenty of hot bottles around her. In my experience, there is but little shock following this operation and they do well from the beginning. They should be kept on liquid diet for several days. The bowels should be moved on the second day either with small doses of calomel or enemas. After thirty-six to forty-eight hours, both vaginal and uterine packing should be removed and the former dressing repeated. This should be repeated again every third day for two or three weeks and longer, unless you have a competent nurse to give douches.

As I said before, I believe this has been the means of my saving two lives, vomiting persisting after I had used almost every drug heard or read of with all palliative treatment mentionable. While there are a very small per cent. that will never require surgical interference, yet, all of you will sometime in your life, if you have not already, especially if you have practice among society women, see cases in which unless you operate or even should you postpone your operation too late, you will lose your patient. There are more deaths from persisting vomiting than one might suppose. Joulain has reported twenty-eight fatal cases out of fifty-seven in which no treatment was used and nine deaths out of thirty-six with treatment (abortion induced). My belief is should many cases be operated on earlier before they are in a

state of complete collapse, the per cent. of deaths would be greatly reduced. I have seen two deaths outside of my own practice. One died within an hour after I saw her, and I verily believe had she been curetted a few days before might now have been living.

With these few suggestions, I will close. Hoping that by such, some human soul may be spared the life which otherwise might not have been.

Indications for and Method of Operating upon the Middle Turbinate Bone.

By John P. Davidson, M. D., Richmond, Va.
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The indications which cause a demand for operative procedures upon the middle turbinate bone may be briefly summarized as follows:

1. For a large and well defined class of cases suffering from nasal obstruction.
2. To remove an etiological factor preparatory for the further treatment of nasopharyngitis, and chronic laryngitis.
3. For the relief obtained in certain cases of chronic catarrhal otitis media.
4. For the beneficial effects procured in cases suffering from reflex nervous symptoms, either accompanied, or unaccompanied, by asthma or hay fever.

It will be observed that the foregoing conditions usually accompany hypertrophic rhinitis—thickening of the mucous membrane lining the nasal chambers. There are, however, important exceptions to this in that the atrophic condition of the mucous membrane is sometimes accompanied by enlargement of the bony structure of the middle turbinate.

In considering surgical intervention for the first class of cases, viz; those suffering from nasal obstruction, it is not intended to give equal prominence to turbinate hypertrophy with that of abnormalities of the nasal septum. Surely no factor figures so conspicuously in the causation of intranasal thickening as deformities and deflections of the nasal septum, either cartilaginous or bony—more particularly the cartilaginous variety, and the existence of such lesions is undoubtedly the first problem presented to us for consideration.

Deflections should be straightened—deformities removed so far as it is possible

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but it must be admitted that irregularities and zigzag conditions of the septum are often presented to us which no known method of treatment can relieve. The ill-effects of such septa are, nevertheless, continuously being wrought resulting in hypertrophic rhinitis of varying degrees.

It is found that this hypertrophy involves the turbinated bones and that the greatest amount of enlargement occurs at corresponding concavities on the septum. It is further observed that the hypertrophy of the middle and inferior turbinates are not of a similar character. In the middle turbinate the bony framework is concerned in the hypertrophy which is shown by an increased resistance to pressure by the probe as compared with the lower turbinate. It presents a less congested appearance, a more regular surface, and usually secretes less.

When we are forced to obtain an increased breathing space by some method to lessen the bulk of the turbinates, it seems to me that a number of reasons may be given why it is more advantageous to attack the middle in preference to the lower turbinate.

In the first place the middle body possesses comparatively little function in comparison to that of the inferior. In the second place the location of the middle body above the inferior is such that congestion in this structure will settle to the inferior by gravitation when the patient is standing, just as congestion settles to one side of the nose when the patient lies on the side. This can be readily observed in those patients who have had the inferior turbinates repeatedly cauterized with a recurrence of the congestion: the same cases presenting an entirely different appearance in the lower turbinate after having the hypertrophy of the middle bone removed. It is amazing to see how quickly the lower turbinate will lessen in its size with no treatment other than cleanliness after removal of a portion of the middle turbinate. In the third place when the anterior portion of the bone is enlarged it prevents a proper drainage from the meatus and sinuses above and the secretions from these cavities are drained, by the projection posteriorly of the middle turbinate, into the vault of the pharynx. This would be an obstructive lesion demanding relief which would not be complained of by the patient as an interference with breathing tho' the drainage posteriorly of the secretions may be offered as a complaint.

It may be necessary to remove a portion of the middle turbinate to procure better

drainage in cases of disease of any of the accessory cavities. The close apposition of this bone to the openings of the several sinuses render it susceptible of being secondarily involved, and, as a matter of fact, we frequently find it softened, enlarged, and in a condition of so called polypoid degeneration from its being secondarily involved by diseased conditions of the accessory cavities. By its removal in these cases drainage is facilitated and a better access is gained to the diseased region, and more efficient treatment instituted.

2nd. The second class of cases in which disease of the naso-pharynx and larynx require a partial removal of the middle turbinate are of equal importance with those accompanying obstructive lesions in the nose. It is a well recognized clinical fact that naso-pharyngeal catarrh together with chronic laryngitis are frequently the results of diseased conditions or anomalous formations of the nasal chambers. Admitting this fact it is not difficult to see why the enlarged middle turbinate figures so conspicuously as an etiological factor in the production of these secondary conditions when we recall the anatomical location of the middle body and observe that its enlargement and projection posteriorly renders it a natural drainage for the secretions of the superior meatus and sinuses of the nose back into the vault of the pharynx. And, moreover, projection of the turbinate in a shelf like manner from its attachment towards the septum, and slanting as it does from above downward, from before backward, preventing the natural secretion from passing over the turbinate and directs it into the vault of the pharynx. An ideal arrangement is therefore established for the drainage of the upper portion of the nasal chambers in the posterior direction. This method of drainage is made perfect when the increase in the size of the bony structure is sufficient to make pressure against the septum throughout its extent from before backward. The constant dripping of these more or less pathological secretions into the vault of the pharynx must add to whatever other causative factors exist there to produce such an inflammation.

Just why chronic laryngitis ensues upon chronic nasopharyngitis cannot be exactly explained. Perhaps the constant effort made to clear the throat, caused by the constant dropping from the vault of the pharynx may produce an irritation and cough, which, when kept up for a period of time, will produce an established chronic laryngitis. This dripping from the projecting end of the turbinate may fall in the region of the epiglottis and produce a

mechanical irritation which extends into the larynx.

Rhinoscopic examination frequently reveals the enlarged and projecting turbinate covered by its own increased and perverted secretion together with that collected from the cavities above. After the removal of these secretions by the employment of the post nasal douch, the middle turbinate presents a pale, flabby appearance from its long continued congestion.

The 3rd, and perhaps the most important class of cases demanding the removal of a portion of the middle turbinate is the progressive impairment of hearing due to chronic catarrh of the middle ear. I am prepared to hear this statement criticized, but I can append the history together with the functional testing of a number of cases operated upon during the last eighteen months, which it seems to me would bear out this assertion. It is indeed striking to see how frequently enlargement of the middle turbinated bones occurs along with chronic catarrhal otitis media cases. When we consider the relation of the bone in question to the opening of the Eustachian tube, particularly when the size of the bone is increased at its posterior extremity, we observe its location to be just anterior and above the tubal aperture. Now then an inflamed or congested condition of the posterior extremity of the bone would have the same tendency to produce congestion by gravitation about the opening of the tube that it has in its anterior portion to cause hyperemia of the inferior turbinate. The existence of inflammation of the mucous membrane here will necessarily extend into the tube and along its caliber to the middle ear.

Even when actual inflammation of the lining membrane of the tube does not take place, the engorgement produced by the enlarged end of the turbinate interferes with the return circulation from the middle ear. The reason for the improvement of hearing is perhaps not the same in all cases. In some instances the removal of the mechanical obstruction caused by the bone, is the source of relief. The improvement of a localized inflammation in this region accounts for the benefit in other cases. But what is most observed clinically is a general improvement obtained in the condition of the upper air passages as a whole. In speaking of the improvement of hearing in these cases as a class, it may be stated that the forced whisper is heard at greater distance, as is also the watch, and that the lower tone limit is reduced from the point to which it has been raised. They have all been cases which possessed normal, or,

practically, normal hearing for the high tones, so that no change has occurred for the Galton whistle. It is furthermore fair to state that the other usual methods of treating these cases has not been suspended, though surely the effect cannot be attributed to this alone, since some of them have been cases which have been treated vigorously from time to time.

The 4th class of cases comprises those which are afflicted by neurotic symptoms, either accompanied or unaccompanied by asthma or hay fever.

I have to confess that I have not been impressed with the frequency of headache produced by the pressure of the enlarged middle turbinate against the septum which many observers report. I believe that many such cases can be traced to latent muscular and refractive errors. It is by no means intended to dispute the existence of such cases, but to convey the idea that they are not as frequent as is generally supposed. The fact that such headaches are relieved temporarily by the application of cocaine does not prove them to be pressure headaches. Cocaine will relieve headache from other causes temporarily so that it cannot be relied upon as conclusive evidence in establishing the presence of pressure headaches. On the other hand the reflex nervous symptoms giving rise to asthma and hay fever are by no means rare, and surely constitute a very important class of cases demanding surgical intervention in the nose and especially upon the structures of the middle turbinated bones.

Methods of operating upon the middle turbinate. Of the different methods used to remove a portion of the middle turbinate my preference is decidedly for the cold wire snare. The snare which is the most desirable to me is the old Sajous slightly modified. I show it as modified by Powers and Anderson of Richmond, Va. for me. The change made is a very much larger thumb screw thereby facilitating turning and, second, two holes are made in the end to contain the ends of the wire. This very greatly facilitates threading by putting one end of the wire through the hole farthest from the end and screwing it down until this passes within the shaft when the remaining end of the wire may be passed into the distal opening after which the excess may be cut with the wire scissors.

The next question is that of the most desirable local anesthetic. Certainly cocaine secures for us the most profound anesthesia, but it greatly exsanguinates the soft tissue covering the bone and, therefore, makes grasping it with the snare far more difficult. The shrinking of the lower turbinate

by the action of cocaine is, of course, desirable since it produces a much larger cavity in the region of the lower turbinate and thereby facilitates the manipulation of the snare. Recently I have discontinued the use of cocaine and have been using extract of supra-renal capsule and holocaine. After having made an application of an aqueous solution of supra-renal extract to the lower turbinate and inferior meatus, we secure as much shrinkage of the mucous membrane as it is possible to obtain from any known agent. After having applied the supra-renal extract we can effect satisfactory anesthesia of the middle turbinate by the use of holocaine which does not exsanguinate this body as cocaine does. While holocaine is quicker in its action than cocaine it is less profound in its effect though my experience with it has been confined to weaker solutions than that of cocaine which we ordinarily employ. Not being as familiar with the constitutional manifestations of holocaine as with those of cocaine has prompted me to use the weaker solution, and 2 per cent. has been the strongest application I have employed so far. By using the methods of anesthetizing just described it is possible to remove portions of the offending turbinal which it is impossible to do with the snare under cocaine anesthesia. When the turbinate is enlarged throughout its extent it is not possible to surround it at one grasp of the snare. Under such circumstances it is most practicable to remove the posterior extremity first and a second attempt may be made for the anterior portion. It is usually advisable, however, to leave the second portion for a subsequent sitting. Snaring the middle turbinate cannot be regarded as an easy operation, and occasionally we find it impossible to accomplish it. In such cases the biting forceps devised by Lester are invaluable. The wound is not left as smooth as it is from the cold snare, and, furthermore, it is sometimes necessary to make several "bites" before we remove it sufficiently.

Usually the hemorrhage ceases in a few minutes, except a slight tinge to the nasal secretions. When the hemorrhage is slightly excessive it is checked by a small pledget of cotton packed against the wound. Very rarely it is necessary to plug the nose tightly with iodoform or some antiseptic gauze, which must be removed on the following day, when it may or may not require a second packing. Secondary hemorrhage occasionally occurs which demands the same management as does the primary bleeding.

The subsequent treatment consists in cleanliness secured by some antiseptic spraying solution, to be used by the patient. In-

fection has occasionally occurred, but its origin has practically always been traced to the lack of proper care. I have not seen any unfortunate complication result from infection other than a muco-purulent discharge accompanied by a certain degree of reaction in the region of the wound. My method of treating this complication is irrigation with a warm antiseptic solution through the opposite nostril. I never remove both bones at the same sitting, but wait for the reaction produced by the first to subside before attacking the second.

Study of *Passiflora Incarnata*.*

By G. A. Ramsaur, M. D., China Grove, N. C.

This plant, indigenous in our Southern States, is not to be found in any recent work on materia medica—at least not in those I have consulted, and it is not official.

Physicians who have been reared in rural homes are familiar with its growth and have enjoyed the delicious flavor of its fruit, but its efficacy as a drug has been known only of recent years and to a limited number of the profession.

Some investigators describe three species of the plant, namely, *Passiflora Incarnata*, *Passiflora Cerula*, and *Passiflora Luta*. In Dunglinson's Dictionary I find a description of *Passiflora Laurifolia*. It is indigenous in Surinam. The fruit has, says the Lexicographer, a delicious smell and flavor, and quells thirst, abates heat of the stomach, increases appetite, etc. The *Incarnata* is the variety used as a medicament in the South. I know not its botanical classification, which concerns us little, though its history and usefulness as a remedial agent is important.

To Dr. Joseph Adolphus, of Atlanta, Ga., and others, we are indebted for a greater part of our knowledge of its physiological action and therapeutical usefulness. Dr. Adolphus has prescribed it for the past eight years with almost phenomenal success. Its *modus operandi* is not clearly understood, but it is without doubt a nerve sedative, both cerebro-spinal and sympathetic, an antispasmodic and soporific. Its action on the abdominal viscera, says Dr. McIntire, of Illinois, appears to be similar to belladonna, and on the brain and spinal cord rather between rustoxicodendron and Gelsemium. It is certainly a great inhibitor of reflexes, and it is in this sphere of action it

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plays its best part as I shall endeavor to show later on. Its action is most strikingly pronounced in the diseases of children and women, particularly the convulsive and neuralgic forms.

It undoubtedly acts as a sedative to the ganglionic cells in the gray matter of the cord; also on the ganglia of the thorax, pelvis, and abdomen as well as on those of the brain. Its influence in quieting and sedating the sympathetic system of nerves is very striking, and also the centers of the medulla oblongata.

In studying its physiological action it appears to be free from narcotic properties. The after effects are nil, leaving the patient refreshed and the nervous system strengthened.

Speaking of its therapeutical triumphs, it is said to have been first used as a medicament by an old physician of New Orleans in epilepsy, who treated several cases successfully with a fluid extract of the plant and root.

In children of a nervous diathesis and who cry and fret at night, especially without any apparent cause for so doing, I have found it almost a specific. In teething children, who are petulant and nervous, I have prescribed it with happy effect, it calms the nervous system, produces sleep, and the child awakes in the morning refreshed. It should be given several times daily and in full doses in these cases.

In that dread disease—cholera infantum—it is the remedy par excellence. When the little patient is very petulant and restless, finding nothing to please, it acts like a charm. It is also invaluable in these cases where there is a tendency to brain complication, the occiput extremely hot, the child boring his head in the pillow and rolling it from side to side, sleeping only for a few moments, then waking with a sharp cry, and continuing to fret and cry for some time, *passiflora* has done good work for me in all the cases I have prescribed it, tranquilizing the nervous system and producing sleep.

Dr. Beckford, of Atlanta, Ga., says in a case of cholera infantum of extreme gravity and where every thing tried had failed to allay vomiting and restrain diarrhoea, *passiflora* acted marvelously. He saw the parents were losing confidence and the child would soon die if the disease was not soon controlled. He called the father aside, told him he knew of only one more remedy and would try it, and, if no benefit resulted, would suggest a consultation. He then hastened to the office of a neighboring physician, procured some tr. *passiflora*, and powders of 1-10 gr. bromide pot., and 1

gr. bismuth, suggested by the physician called on, and gave one powder immediately on returning to bedside of patient; the powder was instantly vomited. He waited a few minutes and gave a *teaspoonful* of *passiflora*, which was retained. In twenty minutes he gave another powder, and in twenty minutes more repeated the *passiflora* which was given a third time after a lapse of twenty minutes. The child gradually became quiet and when an hour and a half had passed, was sleeping sweetly. He left and returned in an hour later to find both mother and child enjoying a refreshing sleep, which neither had done for two or more days. Next morning he found the patient much improved and alimentary canal quiet. I have seen *passiflora* act almost as marvelously in these cases, and it is a notable fact that these little *patients seldom vomit it*.

Dr. McIntire, of Illinois, said in the Chicago Times, "when a parent brings a child to me that keeps the whole family awake by its nocturnal cussedness, I give it *passiflora* and tell the parents it will sleep the following night and it sleeps."

I have prescribed *passiflora* a number of times in the insomnia and nervousness of typhoid fever with good results, and in the typhomania of the latter stages it is also a valuable remedy, tranquilizing the nervous system, producing sleep and leaving the patient improved and refreshed after enjoying the much needed rest. In insomnia I gave it three or four times daily in *full* doses, and in delirium every 1, 2 or 4 hours, according to the exigencies of the case, until the desired effect was produced, then less often for several days.

Dr. Adolphus, in the Medical World, says:

"In one case, typhoid fever particularly, which I recall, in which the patient was exceedingly restless and sleepless for five days and nights, I saw before me what I regarded as a probably fatal case. In this extremity, and as a last resort, I gave the patient tincture *passiflora* in twenty-drop doses every two hours. The last two doses were large half teaspoonful, repeated at half an hour. Sleep came in half an hour after last dose and lasted five hours, refreshing and restful sleep. The remedy was repeated in twenty drop doses every four hours during the next two days, to provide against any returning restlessness. The case went on regularly to convalescence."

In the many ills that woman is heir to, it is an inestimable remedy. It is the remedy par excellence in nervous dysmenorrhoea, and I have seen it act in so kind a manner in these cases, relieving pain and nervous-

ness, that the patient was tided over the period with comfort, and spared the necessity of taking her bed. It should be given a few days prior to and during the menstrual period. In ovarian neuralgia and pains produced by womb troubles it does good work.

In facial neuralgia I have seen it cure when the usual remedies had failed, and I recently cured a case of intercostal neuralgia of long standing with it. In fact, it is good in all forms of neuralgia. In a case of nervous prostration and threatened paralysis in an old man the insomnia and trembling of hands were entirely relieved and nervous system restored to normal tone.

Dr. Adolphus reported he cured, while living in Macon, Ga., a valuable horse of lockjaw by drenching him copiously with a decoction of the root; about two and a half gallons were given during an evening. The horse was left to himself during the night with the prognosis that he would be dead by morning, but when visited by the doctor and his owner he was found entirely relieved, grazing in the lot.

In a case of diabetes mellitus *passiflora* alleviated the neuralgic pains and relieved the insomnia and restlessness of the patient even better than codeine; it did not seem to influence the polyuria or decrease the quantity of sugar, however.

The preparation of the drug used was a concentrated tincture of the bark, root, leaves, flowers and green fruit of the plant, made by my druggist. The medicinal properties in the plant seem to be of small percentage and nothing but a concentrated tincture—pound of plant to pound of proof alcohol—is satisfactory. The dose is laid down by different writers as 10 m. to 3, though I believe this dose of the drug is rather small, and the frequent cause of unfavorable results and disappointment. If you remember Dr. Beckford gave his case of cholera infantum a teaspoonful, and I have often given a child, under one year, from 30 to 40 drops with good effect.

I will close by quoting a few extracts from a paper read before the Chicago Academy of Medicine and published in the Medical Era of December, 1892.

"It has special action on the ganglionic cells of the gray matter of the cord. In insomnia it acts like a charm without any unpleasant after effects.

"It is valuable in neuroses, and reliable in tonic spasms, which are present in a great number of cases of spinal meningitis, and will prevent clonic spasms.

"In nervous affections following congestions of the cord and ganglionic centers, it produces a quieting effect not produced by

any other remedies, and in rapid irregular respiration, due to irritation of the medulla.

"It is a specific in the pains of the heart, with an irregular pulse, when there is no fear of immediate dissolution and constant fear of death.

"In the irregular pains of pregnancy its action is sure.

"In insomnia from over indulgence of alcoholic beverages it acts like a charm, given in full doses every hour till rest is produced.

"It relieves innervation of the nerve centers; sympathetic innervation, especially so in epilepsy, given at night when nightly attacks occur.

"In enlarged prostate through its action upon the pelvic ganglia, it exerts a special action.

The Consumptive and the State.*

By Louis F. High, M. D., Danville, Va.

No other disease that afflicts mankind claims so large a number of victims as consumption. From infancy to old age it is the chief cause of every seventh funeral procession that wends the sorrow-stricken way to human finality.

Knowledge of its direful results is becoming more wide-spread, and each passing year chronicles large and unified action of willing hands and ablest minds to mitigate its devastating influence. Its invasion of palace and hovel has joined the hands of royalty and peasantry in the crusade against the disease, and, touching elbows to elbows, the rulers and the ruled are taking up arms against the common enemy.

The contagiousness of tuberculosis is well established, and it is this characteristic that gives the disease one feature of its great importance and renders its relation to mankind of so much interest. A general and clear appreciation of this fact by all the people is a present hope whose realization would be humanity's greatest boon. It is from lack of information in this connection that most opposition is met in the contemplation of any measure looking to the protection of the community.

With the present knowledge of the limitations of the communicability of the disease, enough is already known, were it possible to elicit the co-operation of all persons, to produce astonishing reduction in the mortality rate.

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So patent are the advantages of intelligently directed preventive measures that a constantly increasing number of the brightest minds are possessed of the idea that the brief authority of the individual physician should be amplified, and that the importance of the subject fully merits legislative enactment.

The general and wide-spread existence of the bacilli from cases that exist all over the land, affords ample means for its communication everywhere and all the time. Personal effort for protection can have only a relatively small degree of value so long as the uninstructed and careless victim is allowed to remain a portable disseminator of disease-producing germs. For the same reason the attempts of municipalities to prevent the development and spread of tuberculosis, will fail short of the good results that would be a consequence of preventive means under the direction of the State.

That the anti-spitting ordinances serve a useful end, no right thinking mind should deny, for they do accomplish much and should exist in every city and town. They are a step in the right direction, and, aside from the sanitary aspect, they are important educational factors, giving a proper bent to public opinion and paving the way for more radical measures.

Of great importance also is compulsory disinfection of houses or apartments occupied by consumptives at intervals during life and after death or removal. It should be done with the same thoroughness that is usual after an acutely infectious and contagious disease. While some cities and towns have ordained these and other regulations for their protection, the reward is not what it should be, for the limitations of corporate boundary are so narrow that the healthy granulation is bathed on all sides by foul secretions.

We cannot soon hope for continental co-operation in the formulation nor execution of plans for the prevention of tuberculosis. National participation is a dream of the future. So, coming down to the largest political subdivision with which we can expect to achieve a degree of success commensurate with the gravity of the subject, is the State.

The State cannot contemplate a more justifiable act than the protection of its citizens and the safe-guarding of the public health. Especially is this true in the case of pulmonary tuberculosis, which heads the list of diseases as a cause of human death, and whose existence depends on social conditions rather than on neglect or misfortune of the individual.

If the State should become responsible for

the care of its consumptive poor and regulate the conduct of the well-to-do and wealthy, the greatest gain would be noted in the decline of the general mortality rate from the disease among those not yet infected.

As the ranks of consumptives are recruited principally by the germs contained in the expectorated secretions of pre-existing cases, deposited in all sorts of places and under nearly every condition, unless restricted by law or a sense of moral obligation, it is at once evident that the only way to protect the community is to teach the consumptive how they may live so that they will not be a source of infection to others.

In several States are already well organized and ably officered Societies for the Prevention of Tuberculosis. By means of leaflets, public lectures, and addresses, the public is being instructed in the means for individual protection. Much good will unquestionably result from this work.

Unfortunately, knowledge of right and wrong does not always regulate conduct. Therefore, no matter how well-versed the people may be in the knowledge of means for prevention, there is always a vicious element who are heedless of the importance of so exacting a requirement, and whether such contingent is large or small, it is great enough to minimize an otherwise happy result. Here it is that the State's authority must intervene to render the aid necessary for perfect prevention.

There is no way of attacking the fountain-head of the infective source that will yield results so large as public sanatoria where the poor can receive proper care and treatment without cost. Such provision promises recovery to the incipient cases in a large majority of instances, for tuberculosis is most readily curable in its earliest stages.

The value of human life cannot be estimated in cents and dollars. But it has been shown that the State would be the gainer when by the expenditure of the required sum of money the citizen who loses from one to three years of the most productive period of life, and finally dies, could have used the time thus spent in remunerative labor.

During these years of illness the family is often handicapped in the attempt to provide for themselves, for it is oftenest that it is the mother or father who is the first victim. After his or her death, the family, to a greater or less extent, has to be supported in varying degrees by public charity or private philanthropy.

Then, too, it is the curable and incipient

cases which go untreated that furnish the foci of contagium from which the community is infected.

To cite a commonly met and typical example: The germ becomes implanted usually in the lungs. The progress of the disease is generally slow, during the early part of which the course is irregular, alternating in shorter periods of improvement and longer relapses. Unable to work, but not confined to bed, he still mixes with the public to a greater or less extent. It is from these ambulant patients that the community stands in greatest danger. Caseated areas are breaking down constantly, and the sputum is swarming with active bacilli. Knopf states that an individual during this stage expectorates seven billions of bacilli in twenty-four hours.

Later in the course of the disease, the patients still bringing up as many bacilli as formerly, is not so much a menace to public safety, for he is unable to leave his room, and it is now the members of the household who are most likely to become, if not already so, infected. Those persons thus infected go through the same course in turn, just as the first victim. As some times happens, one or more of the family, with greater resistance than the others, probably acquired from the nature of the occupation, natural vigor of body, habits of life, or a different hygienic environment, escapes the disease altogether, or failing in this, it runs a slow course extending through several years.

During this time, the person marries and has a family of children. Finally he takes a cold, has a pneumonia, or pleurisy, or the health from some cause runs down; the lowered vitality allows the bacilli to begin their inroads, and unless the disease is recognized, or the patient happens to get proper treatment, it runs on to a fatal termination, during which other persons in turn become infected. So the disease continues; ever created anew, and so it will ever be until provision is made whereby shelter and treatment can be given to patients in every stage of the disease.

Of the results that have followed the treatment of tuberculosis in special hospitals and sanatoria, comes the encouragement that to all who have investigated, warrants the unyielding position taken for the State aid.

Nearly all of the statistical data that exists in this country are taken from the records of pay institutions where the best results have not been obtained as regards the curability of incipient phthisis, not from lack of proper treatment, nor can the results be argued against the effectiveness of

sanatorium methods, but are due to the well-known fact that of those who are treated in special hospitals, too few go sufficiently early. In many cases, it is only after one or more physicians have exhausted the usual routine of general phthisio-therapeutics in a home where treatment was handicapped by ill-suited environment.

But in spite of this disadvantage, they make a favorable showing. The following table (Prophylaxis and Treatment of Pulmonary Tuberculosis, Knopf) is the most recent statistical compilation on the subject:

"The Loomis Sanitarium, Liberty, N. Y., reports 25 per cent. of cures, and 50 per cent. of ameliorations; 70 per cent. for early cases.

The Adirondack Cottage Sanitarium for Consumptives, Saranac Lake, N. Y., reports 20 per cent. to 25 per cent. of cures, and 30 per cent. to 35 per cent. of ameliorations.

The Sharon Sanitarium, near Boston, Mass., reports 25 per cent. of arrested cases and a much larger percentum of improvements.

The Winyah Sanitarium, Asheville, N. C., reports 26.64 per cent. of cures and 42.47 per cent. improved."

Adding together the improved and cured in the four examples cited, we see that upwards of 67 per cent. of all who have been treated in special institutions have been benefitted.

In some of the European countries, Germany in particular, governmental aid for the poor to prevent the spread of tuberculosis has been given for a number of years. As evidence that the interest is growing in that direction, I need but remind you of the several splendid gifts to this work from crowned heads.

In summing up the statistical results of treatment, the most important consideration is likely to be over-looked, i. e., the patients are not only very often cured, and nearly always greatly relieved and improved, but of greater moment, as sources of infection to others they were rendered harmless by being separated from the general public and detained in a home-like environment where all infectious material originating from them was destroyed. At the same time, they were educated, as all persons are who are treated in special institutions, in those means that lessen the chances of infecting others and re-infecting themselves.

If it were possible to add to the list of recoveries those from whom the disease was prevented by the removal of the infective foci, the per centum would be largely increased.

The histories of those places where sana-

toria have been longest established, show in some instances, that the death rate among the people of the community has diminished more than one-third, which proves that not only those who are treated are educated in means of prevention, but that the population is instructed in a better way of living. Each person treated in a Sanatorium becomes an educator of those around him.

Large sums of money are spent each year by the health authorities throughout the land to prevent invasions of infectious diseases, and to prevent the spread of others constantly in the confines of our country. There is no other investment that yields such bountiful returns of peace and safety. Popular sentiment approves the action for the reason that the direful results of neglect are patent to minds untrained to scientific observation.

The insidious development and slow progress of consumption is in marked contrast to the rapidly fatal diseases of a pestilential nature that are so well guarded against that they cause the minimum number of deaths. The almost imperceptible beginning and the gradual development of tuberculosis have delayed, in some measure, the professional and lay mind in fully conceiving the devastation that silently follows.

The knowledge of prevention has gone beyond the domain of the physician and projects itself into the scope of the statesman's duties and into the field of the philanthropists' beneficent labors.

Let all of us join hands in a crusade against this evil whose blighting influence seductively steals the smile from the dimpled face of infancy; the roses from the cheeks of womanhood, and the vigor from the arm of manhood.

Four Cases of Penetrating Wounds of the Abdomen with Visceral Lesions, Wounds of Entrance above the Umbilicus.*

By Hugh M. Taylor, M. D., Professor of Practice of Surgery, University College of Medicine, Richmond, Va., Surgeon to Virginia Hospital, etc., etc.

The idea is often impressed that a bullet wound of the abdominal cavity in which the wound of entrance is above the umbilicus, is very much less frequently attended by serious visceral lesions. We have had the opportunity of deciding the correctness of this conclusion in four cases of bullet

wounds of the abdomen. In each instance the wound of entrance was above the umbilicus and in each we found multiple visceral lesions to treat. This experience seems to warrant us in concluding that it is an error to have principles for our guidance in the treatment of penetrating wounds of the abdomen below the umbilicus which do not apply with equal force to similar wounds in which the wound of entrance is above the umbilicus.

Notably in the last edition of the American Text-Book of Surgery it is impressed that a bullet "which passes through the lower part of the abdomen from side to side or obliquely is almost sure to produce from four to fourteen perforations of the intestines, while the absence of dangerous visceral wounds may be inferred with some degree of probability if it crosses the abdominal cavity in an antero-posterior direction at or a little above the umbilical level."

Such unqualified declarations if allowed to pass unchallenged cannot, we think, fail to have an influence opposed to early operative intervention in supra-umbilical penetrating wounds of the abdomen. The following cases impress the fact that it is very much more important to try and infer the probable course of the bullet by ascertaining the position of the party shot to the one by whom the wound was inflicted:

CASE I.—A young girl, about seventeen years of age, received a pistol wound through the left mammary gland. The wound of entrance was towards the axillary border of the gland, apparently passed through its base. I was informed that the girl at the time of the accident was seated in a low chair by the fire and her father in taking a pistol from a tall mantle accidentally discharged it. A study of the probable course of the bullet would indicate a passage from above downward and from left to right across the abdominal cavity. When seen a few hours after the injury by her physician,* he found no evidence of shock or hemorrhage or any manifestations of serious injury, but recognizing the probable course of the bullet he brought her as quickly as possible to Richmond. When I saw her twelve hours later, there was no doubt of a serious intra-peritoneal injury. The rapid pulse, elevation of temperature, muscular rigidity, distended abdomen, and abolished peristalsis were conclusive evidences of peritoneal penetration with visceral lesion. A section disclosed a perforation in the diaphragm, two perforations in the transverse colon, five perforations of the small intestine, and one in the cecum. The lesions were closed by mattress sutures, irrigation

*Read Before the meeting of the Tri-State Society of the Carolinas and Virginia, held in Charleston, S. C., Feb. 20th, 21st, 22d, 1900.

*Dr. Deitrick of Hanover Co., Va.

and wiping were practiced and multiple drainage was provided. The patient died in twenty-four hours from septic peritonitis.

At the time of the operation, twelve hours after the injury, the evidences of suppurative peritonitis were generally manifested. With our best efforts the operation was not performed in time to prevent septic peritonitis and, as is usually the case, the operative intervention was impotent to cure it. This case impresses that most important truth, that the successful surgeon in such cases must be the one who gets into the abdomen early and out of it just as quickly as is consistent with good work.

In this connection, it may be well to recall that while an early operation, and an operation of short duration, is a great desideratum in all acute intra-peritoneal infections, good work is equally essential, and we are admonished not to begin such work handicapped by poor assistants, etc. A post mortem in this case satisfied us that no lesion had been overlooked and no leaking subsequent to the suturing had occurred.

CASE II.—This case equally impresses the probability of serious multiple intra-peritoneal lesions with supra-umbilical wound of entrance and the further fact, that the probable course of the bullet is an essential consideration. The case was a homicide, and as the prisoner was acquitted, we presume the defence proved, as was claimed, that the party shot had the prisoner down beating him. However that may be, we found a wound through the left rectus muscle, an inch or more above the umbilicus. A section disclosed nine perforations of the intestines and nine of the mesentery. The patient was not brought to Richmond until twenty-four hours after being wounded and in that time gross manifestations of intra-peritoneal infection were evident. This case is further interesting, in that the patient lived for eight days after the operation and died from acute infection and sloughing of the abdominal incision. While septic peritonitis existed at the time of the operation, thorough irrigation, wiping, and multiple drainage seemed to have arrested infection from that focus, and I think the patient would have recovered but for the sloughing of the abdominal incision throughout its length and depth. The abdominal incision was presumably infected either by the septic contents of the peritoneal cavity at the time of the operation or subsequently through contact with the strips of gauze drainage. Localized peritonitis around the abdominal wound occurred. Coils of intestines protruded into the open abdominal wound, became adherent, and shut off the focus of infection from the general perito-

neal cavity. In this case, I tried, without appreciable benefit, antistreptococcus serum (Parke, Davis & Co.). I think this patient's life was prolonged by the free use of saline solution under the skin and by the exhibition of two drops of croton oil between layers of glycerine to relieve distension of the adherent intestines and certainly the patient's comfort was greatly promoted by irrigation and syphonage of the stomach to relieve the gulping vomiting of general sepsis. A post mortem revealed that there had been no leaking into the peritoneal cavity, the sutured points were all closed and the general peritoneal sac was practically dry.

The bullet on entering the abdomen had passed from above downward through the whole length of the peritoneal cavity to the pelvis and was found loose in Douglas cul de sac, having probably rebounded after striking somewhere on the bony pelvic wall.

CASE III.—A third case of supra-umbilical wound was received while the injured man was standing on the ground and the party who did the shooting was on top of a passing box or coal car. The wound of entrance was above and to the right of the umbilicus.

A section disclosed a perforation of the greater curvature of the stomach and also a perforation of the free margin of the liver. The position of the parties was sufficient to warrant the inference that the bullet had passed through the peritoneal cavity from right to left and from above downward, as it lodged in the left lumbar muscles.

A section six hours after the reception of the injury was made, the stomach lesion was sutured, the wound in the liver plugged with a long strip of gauze, one end of which was brought through the abdominal incision, and the man made an uneventful recovery.

CASE IV.—A policeman was shot while in pursuit of a prisoner. The wound of entrance was considerably above and to the left of the umbilicus. The bullet passed through the right lobe of the liver, the right meso-colon, and lodged in the muscles of the right lumbar region. In spite of the fact that prompt operative intervention was resorted to, this patient bled to syncope, and I attributed his death, which occurred in twelve hours, to acute anemia incident to hemorrhage. Even when the wound of entrance is below the umbilicus we have no symptom or combination of symptoms which enable us to differentiate between the penetrating and non-penetrating bullet wound and certainly no group of symptoms

which differentiate the penetrating wound with from one without visceral lesion.

The occurrence of a number of symptoms such as muscular rigidity, abolished peristalsis, and shock with reaction and succeeding shock are strongly suggestive, but not confirmatory, and are of especial value as when they do occur they are early manifestations. There seems a consensus of opinion that there are no symptoms of intra-abdominal lesion sufficiently uniform in their expression to enable us to make an early diagnosis of penetration with visceral lesion. Decidedly more exact information may be obtained by a study of the probable course of the bullet, by a careful dissection of the tubular wound tract and on feeding it a penetrating wound by an exploratory celiotomy.

By these means only can we ascertain beyond all question, the exact extent of the morbid lesion in time to do preventive and conservative surgery. The late symptoms, i. e., those incident to septic peritonitis, are of course gross in their manifestation, and any one can make the diagnosis, but with their occurrence we have lost the key to success—an early operation to prevent acute intra-peritoneal infection.

I am conscious of the fact that able clinicians impress the idea that we not infrequently have penetration without visceral lesion. I admit such a possibility, but doubt its frequency.† Operative intervention upon all sorts of cases has saved 67 per cent., and an early operation in a series of cases should give even better results.

This showing is, we think, a sufficient proof that serious inactivity until the occurrence of symptoms of acute intra-peritoneal infection is bad surgery, no matter where the wound of entrance is situated.

Pneumonia and Its Treatment, with Report of Cases.

By J. W. P. Smithwick, M. D., LaGrange, N. C.

The attacks of this disease are confined to no one locality, though in some sections it is more prevalent than in others; and especially is it found occurring in places where the humidity of the atmosphere is great accompanied with sudden changes in

the temperature. The exciting causes is the *diplococcus pneumoniae* which has its seat of election in and produces its chief effects on the lungs. There are many predisposing causes such as cold, exposure, alcoholism, previous attacks, or a debilitated condition of the system from any cause. It is the special enemy of old age, and not many elderly persons recover from its attack unless they have a large amount of vital force.

Pneumonia is a local disease with systemic effects. The organisms produce a poisonous albumen, which in turn produces as a neutralizing agent, antipneumotoxin. This agent neutralizes the poisonous products as they are formed, and is in great abundance when the crisis take place.

The clinical picture of a person suffering with pneumonia is very striking. The attack is usually ushered in with a pronounced chill, lasting from ten to thirty minutes. The elevation of temperature takes place rapidly, and there is pain in the affected side, often of an agonizing character. The frequency of the respiration is increased and there is soon developed a short, dry, painful cough. On the second or third day the appearance becomes quite pathognomonic. The patient lies flat in bed, the face flushed, the respiration accelerated, with each inspiration the *alae nasi* dilate, the expression is anxious and the eyes bright, the cough is increased and the expectoration blood-tinged. The temperature rises to 104 deg. F. The volume of the pulse is full and bounding, and the pulse-respiration ratio is much disturbed. The physical signs are those of consolidation, blowing breathing and fine rales.

The duration of the attack depends, in a great number of cases, upon the treatment instituted. Under the ordinary treatment the crisis occurs ordinarily about the eighth day, but may be delayed as late as the twelfth or fourteenth. In some cases resolution takes place by lysis.

In its treatment we must be on the alert for complications. Pleurisy is an inevitable occurrence when the inflammation reaches the pleura, and if this happens the pain assumes a lancinating character, and respiration increased it. Pericarditis is often a complication in pneumonia in children, and is sometimes very difficult of diagnosis. Endocarditis is a more frequent complication than pericarditis. Meningitis is, by far, the most important complication in pneumonia, and one writer states that eight per cent, of the fatal cases occurring in his practice was due to this cause. It usually sets in at the height of the fever and often is not recognized until the *post mortem*

†In 21 of the 253 operations neither perforation nor serious hemorrhage was found. It is to be doubted whether so large a number of traced penetrating bullets could fail of more serious injury, and there is a presumption of faulty diagnosis in some of them. However, they all recovered; so the operation did no harm.—Grant.

reveals its presence. Relapse in pneumonia is exceedingly rare, and some practitioners have stated that it never resulted in a relapse. Recurrence is more common in pneumonia than any other disease, and one writer relates an instance in which there were twenty-eight consecutive attacks.

Double pneumonia occurs sometimes but presents no peculiarities other than the greater danger connected with it.

As a rule, this disease results in death in about one-fourth of the cases. In children and healthy adults the outlook is good, but in the debilitated, drunkards, and the aged, the prognosis is unfavorable. One peculiar characteristic is that statistics show that it is more fatal in southern climates, the death-rate reaching as high, in New Orleans, as twenty-eight per cent.

Many authorities and writers hold that pneumonia is a self limited disease, running its course uninfluenced in any way, and can neither be aborted or cut short by any known means at the command of the profession. Others just as prominent in medical circles, as writers and authorities, claim that it can be aborted in very many instances. Clinical results are of such a nature as to warrant the assertion that it can be absorbed. A recent writer* addressed the question, "Do you believe it possible to abort, jugulate, or break up pneumonia in its early stages?" to thirty-seven members of the Thuber Medical Association. He classified the answers as follows: Negative, nineteen; affirmative, nine; doubtful, two. The text-books nearly all stated that it cannot be aborted, yet the clinical experience of practitioners prove that it can. If other diseases of microbic origin can be aborted, then why is it not possible to influence the duration of attacks of pneumonia with the proper medication.

Various methods of treatment have been advanced and advocated. Bleeding was a much vaunted measure a short time back, but in all probability it has been a needless cause of a great many deaths. Aconite, veratrum viride, quinine and a host of other drugs have each had their advocates. At present cold applications are in great favor with some members of the profession, but a recent writer commenting upon the methods says he would be afraid to use such heroic measures. I have treated fifty-nine cases during the past two years with only three deaths, a mortality rate of a little more than five per cent. I used Viskolien in solution, capsules and tablets. I used the solution in many of the cases in a manner I have never seen recommended.

I combined it with an equal portion of compound tincture of benzoïn, and would direct that a teaspoonful of the mixture to be placed in a vessel containing boiling water, and that the medicated steam arising therefrom be inhaled deeply. This method has all the effects of topical applications, and I have noticed the beneficial effects following its use many, many times. It relieves the pain, lessens the cough, and acts directly upon the germs and their products. Of course, in the treatment of every case I have used the proper adjuvant treatment, clearing out the bowels and stomach if in an overlooked condition, etc., because the proper preparation of a patient to receive treatment is as essential in the proper management of any disease as administering the specific treatment itself. I have used alcoholic stimulants whenever I deemed their use advisable, and have in most instances applied counter-irritation in the form of mustard plasters over the affected areas of the lungs. All these measures I consider as coming under the category of adjuvant treatment.

I relate a few cases below to show the clinical results obtained by the treatment which I give preference.

A. M.—Age 32. Farmer, previous health and family history good. Was of a robust, vigorous constitution. Had a chill at 7 p. m., having been exposed in cold rain that day. I was called and arrived at 10 p. m. Found his temperature 103 deg. F., respiration hurried, pain over lower lobe of right lung: in fact, all the initial symptoms of a pneumonia attack were present. I gave him a hypodermic of the solution of Viskolein, and left capsules and tablets to be taken alternately every two hours. I also left a small dose of calomel and soda to be given, and directed a mustard plaster to be applied over the affected part. I returned the next evening and found the symptoms very much abated. Temperature was 100 deg. F., there was very little pain, and the respirations were nearly normal. Said he felt much better. The tablets and capsules were continued. The next day I found him with no elevation of temperature, and feeling perfectly well with the exception of muscular weakness. He made a rapid and complete convalescence, and has since been doing well. This is a case according to my judgement and candid opinion, of pneumonia aborted in its incipency.

J. T.—Age 24. Laborer on farm. Previous history of himself and family was good. Patient had had diseases incident to childhood. Was summoned at attend him and found that he had a very pro-

*Merck's Archives, January, 1900.

nounced chill the day before and a high fever ever since. His temperature was 104 deg. F., respiration hurried and sighing. I made an auscultatory examination of the chest and determined that the red hepatization had not set in. The cough was hacking and painful in character, and the expectoration frothy and red, characteristic "brick-dust expectoration. I gave him a hypodermic of ten minims of the solution of Viskolein with an equal amount of boiled water, and left the capsules and tablets to be administered alternately every two hours. I directed that a mustard plaster be applied over the affected side, and also left a mixture of equal parts of the Viskolein solution and compound tincture of benzoin to be used every four hours as a steam inhalation. I returned the following afternoon and found his condition improved. Temperature was 102.2 deg. F., respiration not so hurried and more quiet, and pain was not of such an agonizing character. I gave him another hypodermic of the solution, and directed that the other part of the treatment be continued as before. On returning the next day I found him much better in every respect, having passed a good night. Temperature was 99.5 deg. F., respiration rate about normal, and cough and pain very much abated. I did not repeat the hypodermic injection of the solution, but directed that the capsules, tablets and inhalations be kept up. On my fourth visit, the next day, I found the temperature normal. This was the fifth day of the duration of the attack, and the patient was convalescent. Under the ordinary routine treatment, I believe it would have lasted ten or more days. His recovery was complete and he has since remained well.

M. C.—Age 12. This boy had previously had good health, and was of a good family physically. Had a marked chill the day before I was called. I found him with a temperature of 103.2 deg. F., pain in the right side upon which he lay most of the time, respiration rate was much increased, pulse was one hundred and full and bounding, face flushed and eyes bright. On auscultation I found the breathing quiet and suppressed, accompanied by crepitant rales at the end of each inspiration showing that the stage of red hepatization had not yet set in. I gave a hypodermic injection of five minims of the solution of Viskolein in an equal amount of boiling water, and divided a number of capsules and tablets in equal parts and left them to be given alternately every two hours. I also advised that a mustard plaster be applied over the affected side. Upon returning the next

day I found the temperature 100 deg. F., the pulse eighty-five a minute, and the patient in every way better and more comfortable. I directed that the administration of the capsules and tablets be continued. When I arrived the next afternoon I found my patient sitting up with a normal temperature, normal pulse rate, no cough, no pain, and in fact all the symptoms gone. Said he felt well and he made a rapid convalescence.

O. C.—Age 54. This patient was a farmer of good health usually, though he had one attack of pneumonia previously, but had fully recovered. I was called to see him and learned that about five P. M., on the day previous he had a severe chill. I found him suffering very much, temperature was 102.8 deg. F., respiration hurried and morning in character, pulse ninety a minute and full and bounding, pain in right side very acute in character, face flushed and an anxious expression. The physical signs showed that the stage of red hepatization was just beginning. The cough was dry and hacking. I administered ten minims of the solution of Viskolein in an equal amount of boiling water hypodermically, directed that a mustard plaster be applied over the affected side, left tablets and capsules of Viskolein to be given alternately every two hours, and a mixture of equal parts of the solution of Viskolein and compound tincture of benzoin to be used every four hours by inhalation. I called the next day and found him some better, temperature was 100.5 deg. F., pulse seventy-six a minute, respiration twenty-two a minute, cough and pain better. From this on he made a good recovery and was entirely well in one week's time from the time I discharged him.

Other cases could be related but these are sufficient to demonstrate the therapeutic value of Viskolein in the treatment of pneumonia.

The Heart in Life Insurance.*

By John N. Upshur, M.D., Richmond, Virginia,
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Equitable Life Insurance of
New York, and Union Mutual
of Maine.

To do our whole duty to both the Company which has commissioned us, to the

*Read before the Tri-State Medical Association of the Carolinas and Virginia, held at Charleston, S. C., February, 1900.

agent and applicant, is often a difficult problem to solve, lest in guarding the rights of the Company we do an injustice to the agent and worse still, a wrong to the applicant. Believing that there are many cases in which there are abnormal conditions of the heart, and yet in which that organ is capable of, and does carry on a normal circulation, and consequently in which the applicant has a first-class chance of measuring up to the requirement of living out his expectancy, I am moved to discuss these conditions, at the same time I am persuaded that conditions are overlooked and policies issued upon the recommendation of the examiner, which should be turned down, and so the Company saved from loss. The views herein expressed are the result of a long experience as an examiner in life insurance.

Probably the one condition upon which policies are refused most promptly and hopelessly is *heart murmurs*, and in many cases rightly so. But it must be borne in mind that in the clinical experience of many men, the subject of heart murmur lives out his days, dying eventually from some other cause.

First, I would speak of *functional murmurs*. Any applicant applying for insurance, showing a hæmic murmur, undoubtedly ought to be postponed until an improved condition of his blood causes the murmur to disappear, and all the conditions of a normal circulation to return.

I say *postponed*, not *unqualifiedly rejected*.

Again, some reflex conditions may cause spasm in the columnæ carnæ of one valve, a transient source of irritation of some kind, by which temporarily there is an imperfect closure of the valve, producing a murmur; re-examination at short intervals should be the course pursued here, to determine positively whether the murmur is transient or organic. This reflex irritation may be digestive, may be from excessive use of tobacco, or over work, &c.

There may be an arrangement of the columnæ carnæ, or one of them, by which, in its passage through the ventricle, a portion of blood passing under the chord through a narrow space, produces a bruit, heard at the first sound of the heart; the valves are intact and healthy, circulation normal, pulse steady, the subject can make any amount of physical exertion without any cardiac or pulmonary distress. Careful physical examination fails to develop *any hypertrophy, any misplacement to the right*. Gerhard says *a bruit under such conditions as this is insignificant*, and yet this applicant is refused insurance. A case

illustrative has come under my observation: A young man of fine physique, a physician, applied for insurance, was examined and the murmur overlooked by the examiner. In answer to the question "if he knew anything connected with his health, physical-condition, &c., which would make him an extra-hazardous risk for insurance," he replied that he had a "heart murmur." He had been examined several years before in New York by a distinguished man, who detected the murmur, but expressed the opinion that it would not shorten his life. The case was referred to me by the Medical Director. I made a careful examination, found a curious bruit, *soft at first, and ending at the conclusion of the systole like the twang of a violin string*. There was positively *no hypertrophy*, no misplacement in any direction. The man's physique was perfect, and he had never experienced any discomfort referable to the heart. I rated him as *first-class*, and recommended that a policy be issued, arguing that there could be no valvular lesion for the reasons mentioned above, and the company promptly issued a policy on a desirable plan for a large amount.

Another condition in which the rule should be modified, those cases, which in childhood have been the subjects of an acute endocarditis, recovering with valvular lesion, valves hardened or thickened, having lost in elasticity, but because of the youth of the subject and consequent recuperative powers, compensatory hypertrophy sooner or later develops a perfectly normal circulation results, and a previously feeble child grows to manhood unconscious of any organic affection of his heart, able, often times, to perform hard labor. I have a patient whom I have had under observation since his fourth year; he was the victim of recurring attacks of rheumatism, and the complicating endocarditis; frail and delicate until his fifteenth year, now about twenty-five, has an hypertrophied heart, well marked bruit of mitral insufficiency. Compensation is absolutely perfect. He has had no rheumatism nor endocarditis for at least fifteen years; is nearly six feet in height, muscles as hard as iron, and by occupation a locomotive fireman, work requiring intense strain and active, untiring exertion in a constrained position, and yet absolutely no discomfort from heart. Can the man who has a heart normal in size, valves, and action, boast of more physical endurance? And yet such subjects are turned down, barred from life insurance, and deprived of this safe means of providing for wife and children.

Of course, when subjects have reached middle age, or even adult life, and have compensatory hypertrophy established, following upon an endocarditis and consequent valve lesion, no question arises, because in cases such as this, there is great danger that compensation will fail.

But there is another side of this question: We examine applicants like one recently examined by me: Of fine physique, but overweight, excessive abdominal measurement, with tendency to obesity, but active for a man of sixty, and not aware of any cardiac defect. Pulse intermitted four beats to the minute, auscultation revealed reduplication of heart sounds. The man may live out his expectancy of a little under fifteen years, but the chance is against it; this is the insurance test; and I unhesitatingly declined to recommend the risk. Nor is this all. I am satisfied that more influence should be attached to overweight in men of middle age and over, if they be obese, because it gives rise to suspicion of fatty heart; and while it may be simply a deposition of fat upon the heart walls, and so not as dangerous as when interstitial, yet the chances are too strong that interstitial fatty change will develop long before the man can reach his expectancy. Especially is this true in these subjects, because the tendency to rheumatism, or the development of lithæmia or gout, with consequent endocarditis, or what is more insidious and more probable, atheromatous change in the blood-vessels, and molecular fatty change in the heart walls, promptly places the risk in the doubtful class, at best.

When a murmur exists, there is little risk that it be overlooked, indeed, murmur is confidently diagnosed sometimes when it does not exist, due to the fact that the sound of air in the part of the lung overlying the heart is heard, and the examiner fails to determine the fact by making the applicant hold his breath for a moment, fails to look for evidence of hypertrophy or misplacement.

But a heart in which the walls have undergone organic change, the ventricle dilated, the pulse in the individual, perchance, not too frequent, though it usually would be, and lacking in tension and force, escapes suspicion, and a case which should be rejected is passed, and recommended as "first-class."

I would also emphasize the fact that no risk is first-class, when the sound of the valves *fails in clearness* and is *muffled*, showing *rigidity* and *loss of elasticity*, beginning degeneration perhaps, or an undue *accentuation* of valvular sound, showing, perchance, "a rift within the lute," a some-

thing wrong somewhere; the starting point of increased action in the heart muscle, to eventuate in a compensatory hypertrophy rendered necessary by renal change in the early pathologic process of some form, usually interstitial, or chronic nephritis, with a pulse tension which should always arouse our suspicions, of renal trouble, remembering that in chronic interstitial nephritis, albumen is not so constant nor abundant as in the other forms, especially the parenchymatous.

Alcohol as a factor bearing upon the heart in life insurance is most important. Of course, the daily taking of alcohol in quantity exceeding Ainslie's limit, of itself bars the applicant, but in those subjects who have been addicted to the alcoholic habit, and have reformed, either by simply giving up a habit which they are convinced is harmful, or by the gold cure, it must not be forgotten that it may, and probably has left behind its baleful effects, and I make bold to affirm, that, to say the least, the chance of subtle tissue change in the heart walls, the liver, kidneys, or stomach, are of such a nature as to forbid such a case being rated better than fair only. And to go a step further, if the reform has come about through the *gold cure*, the risk is more undesirable still, and the higher standard companies recognize this fact and do not care to write policies for such risks. I recently rejected an applicant, a physician, who had nine years before been an alcoholic, taken the gold cure, and had been steadfast in his reformation. I found a too rapid pulse, persistently over ninety to a hundred, and feeble; heart action feeble; prematurely grey; nervous. I was satisfied he had fatty interstitial change of the heart walls, and promptly rejected him, confirming the opinion of another gentleman who had previously examined him and declined him; yet he was examined subsequently for another old line company, recommended and a policy issued.

The irregularities of the heart, which come from reflexes, digestive, uterine, &c., are not of so great importance so far as the heart is concerned. It may necessitate a temporary postponement, but the important fact to determine here, is the significance and importance of the trouble which has given rise to the reflexes.

I have been impressed by the influence of tobacco; I can in almost every case tell if the applicant has been smoking or chewing, though not so readily in the latter, by the increased number of beats of the pulse, running it to, and sometimes over, a hundred; significant too is the lack of arterial tension, I cannot think as a practical de-

duction from these practical facts that an organ several times a day subjected to such excitation as the result of over stimulation of the vagus and subsequent exhaustion can be exempt from hurtful consequences.

I have observed that in excessive users of tobacco, the heart when enfeebled and depressed fails to respond to the influence of heart tonics as promptly as under other conditions, except possibly the persistent administration of strychnia. Tobacco heart is unfortunately a practical entity, and sudden death from heart failure in such subjects is not so uncommon as to preclude the gravest consideration in determining the value of a risk, when the applicant is a tobacco habitue. I believe that its influence for evil is as widespread and potent, as insidious and dangerous as other narcotic poisons which are more condemned.

210 West Grace St.

Uses of the Normal Saline Solution.*

By Virginius Harrison, A.M., M.D., Richmond, Va.; Lecturer on the Practice of Surgery, University College of Medicine, Richmond, Va., Etc.

Since the introduction of the saline solution a few years ago, many lives have been prolonged and not a few saved by its use. I do not believe, however, that its value is fully appreciated. Surgery and medicine have been aided in saving life by its timely use and obstetrics is no less a debtor to this agent. The uses are numerous and to go into detail in each class would prolong this paper more than I would wish.

Shock and Hemorrhage.—As the symptoms of shock and hemorrhage are similar in many cases I will treat of both under one heading. When we see cases of shock, whether it be due to an impression made upon the nervous system, as from a blow or to a local vaso-dilatation of large blood vessels, as in the abdomen; to direct external hemorrhage or to a penetrating wound of the abdomen, there is no treatment so effective nor so prompt as the infusion of the normal saline solution. The method to be used must be governed by the demands of the individual case.

I have seen its beneficial effect in shock from chloroform. Intra-venous infusion was resorted to immediately, and a life was saved that would otherwise have probably been lost.

Surgical shock may be prevented or less-

ened in degree by giving the solution in the rectum or under the skin before the operation. If severe shock comes on, the infusion can be put into the veins, and often enable us to complete an operation which would be too hazardous to continue without its use.

During operations the time to resort to the infusion should be determined by the anesthetizer, who is *supposed* to be watching the condition of the patient. The solution should be used before the shock has become profound, which might be the case if left to the operator.

The post-operative rectal injection of this solution is valuable in aiding reaction from operations and in relieving the intense thirst which so often follows.

In hemorrhage we fill depleted vessels and stimulate them to physiological action, and through them the heart and brain are supplied with the proper stimulus. A very short time is required, less than a minute, for the fluid to reach every part of the anatomy. In this connection there is an important point to remember, viz: when possible ligate any ruptured vessel as early as you can reach it, or the solution will make its escape and your effort to do good may be futile. I have seen this illustrated in injuries of the skull and brain, in penetrating abdominal wounds and in other injuries. Often it is impossible to reach the injured vessel at once, when this is the case you must use the solution while hunting the vessel.

Sepsis.—In sepsis from any source we see good arise from the early use of the saline solution, even in late cases marked improvement often follows. To relate its value in surgical sepsis, I know of no better way than to cite examples of its good results. One case I recall of profound sepsis following an operation for double pyosalpinx. For a week her temperature ranged from 104 F. to 106 F. After resorting to all measures that occurred to me, I tried the rectal injection of a pint of a saline solution, and repeated the injection every four hours. As a result, there was a fall in the temperature to 100 F. within twenty-four hours. The enematas were continued until the acute symptoms had abated, and the patient was well on the road to recovery.

Another case was localized suppurative peritonitis, the abdomen had been opened and drained, yet the pulse remained rapid and the temperature high, the salines were used as in the former case with perfect elimination of the poison and the recovery of the patient.

A few days ago I saw a very marked case

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of benefit from the intra-venous infusion. The patient had suffered from a rectal stricture for some years, and had learned to use the rectal bougie herself. By some means the bowel was ruptured and septic peritonitis supervened. As a *dernier resort*, and the only one we had, an operation was performed for the relief. Her condition was critical, the pulse had left the radial arteries, her body was covered with a cold clammy sweat, in fact all the symptoms of impending dissolution. Chloroform was administered and the infusion commenced. In a very short time her skin dried, the pulse returned to the wrist, color to her face and she was in a much better condition than when we commenced the operation. Without the use of the saline I do not think she would have stood for one hour the shock of handling the bowels and the chloroform.

In puerperal sepsis, the results obtained are as certain, prompt and as effective as in surgical sepsis. Unless the source of the infection be removed in either case the benefit derived may be only temporary. We can certainly in both diminish the intensity of the infection until more radical measures can be utilized.

Renal Insufficiency.—Lavage of the blood with the saline solution in that condition known as uræmia has been successfully used so often that there is no dispute as to its value nor of the fact that it has saved lives that seemed hopelessly ill.

Beginning in the early stages of uræmia we can do much to prevent any permanent damage being done to the kidneys. Here the rectal injection will often suffice to obtain the desired results. In the majority of cases however we do not see these cases until the kidneys have ceased to act well and the urea is retained in the system in large quantities, as well as the other toxic elements that go to make up that condition of uræmia.

A case I saw had one convulsion when I was called. I ordered the saline enemas every four hours. She had no convulsion for several days and discontinued the salines without consulting me. Was taken with convulsions within the day that the salines were discontinued, and had nine before I saw her. I gave her chloroform to control the convulsion for the time and then saline again, with no return of the convulsions. These were kept up until the skin and kidneys were acting well. The patient was delivered in two months, full term, without any complications before, during or after labor.

In another case the uræmic symptoms increased after leaving off salines,

In puerperal convulsions when the pulse

is full and bounding I think the best treatment is to bleed the patient and then fill the vessels with the saline solution. It has been advised to bleed from one arm and to infuse into the other at the same time.

I think I have saved the life of a young lady this month by simply using a pint of water and a teaspoonful of salt every four hours by enema. The young lady had measles a few weeks before, and by exposing herself developed pneumonia. All went well until her kidneys became inactive and her system became charged with the poison that should have been eliminated by the lungs and kidneys. Her face was livid. Her pulse was 160 and her temperature was 105.2 F. Such was her condition when I was sent for to see her in consultation. Acting upon my advice, we gave her the saline as above stated, except we repeated the saline in one hour after the first enema. I saw her again in the afternoon and found that her kidneys had acted well and her pulse had come down to 130. She expressed herself as feeling better and she looked better. As this patient was at school some distance from Richmond, I have not seen her since, but her nurse reports the patient recovering. Her temperature and pulse are normal and the kidneys acting well. The patient has entirely recovered and returned to her home.

I am almost sure this patient would have died had it not been for the saline, as her condition was critical when I first saw her. No medicines were given her after my first visit except strychnia and whiskey. We must, therefore, give the saline solution the credit of doing the good that was accomplished.

In diabetic coma the solution has been used, and has acted sufficiently to relieve the coma so that the patient could attend to business for a short time; this was followed by the immediate return of the coma when the saline was stopped.

I have seen this agent do good in the crisis of pneumonia, especially in the aged when the patient was suffering from the depression following the fall in temperature and the profuse sweating.

A note of warning has been sounded in regard to the use of the salines in organic diseases of the kidneys, particularly in old cases. Opinions differ as to the advisability of their use in these cases.

Typhoid Fever.—I have seen the patient suffering from hemorrhage into the intestines in typhoid fever improve under the infusion of the solution into the cellular tissues of the thigh. The pulse increased in volume and became slower, the respirations more natural, the color return to the

lips, the skin became dry, and the temperature return to normal. By this means we may tide the patient over the shock of hemorrhage until the bleeding points become plugged.

I saw this beautifully illustrated last year in the case of a soldier who had had typhoid fever in Santiago. He had returned home to recuperate. The day after his arrival he was taken with a severe hemorrhage from the bowels, such a quantity of blood was lost that he was more dead than alive when I saw him. An aspirating needle from my pocket case, a dirty syringe that had been used in the house, and muddy James river water with a teaspoonful of salt gotten from the table, furnished the solution and instruments for the infusion under the skin. So profound was the shock the patient did not feel the first infusion of a pint. In an hour another pint was administered near the site of the first infusion. The patient rallied, well, had no more hemorrhages and made a complete recovery.

As everything used was conductive to sepsis I was not surprised to find an abscess in the thigh where the infusion was given. This was a small matter in comparison with the other condition I had to treat. I reported this to show that we can use the solution without having things sterile in emergency cases when it is a life and death matter in a few minutes. Had we waited for sterilized material in this case I do not think we would have had a patient to use it on.

Another time to use the saline in typhoid fever is when perforation of the intestine has occurred and the patient is much shocked. Here you wish to sustain the patient until you have time to prepare for an operation to suture the rupture. I have seen its beneficial effect in these cases several times.

This solution is valuable in typhoid fever when we wish to eliminate the poison more rapidly, when the temperature is high and the nervous system excited. I have seen it act better than the sponge bath for this purpose. I always use the solution in these cases, and not only in these cases, but in any condition of ptomaine poisoning. Its value in this condition suggests that it should do good in any condition where the blood has become charged with poison from any source.

Technique.—The apparatus necessary for the direct intra-venous infusion is simple and should always be at hand. A fountain syringe and a common eye dropper will be all that is necessary. There are special tubes for introduction into the veins, but I doubt that they have any advantage over

the dropper, and certainly not if you have a ridge filed around the end of the dropper for the suture to hold by. The tube is held in the vein by a ligature being thrown around the vein and tube and then tied. When introducing the tube the solution should be allowed to run until the water is hot, and the solution to continue to flow while introducing the tube into the vein to prevent air getting into the circulation. The vessel usually selected is the median basilic or cephalic at the bend of the elbow. I think the left arm should be selected.

For subcutaneous (hypodermoclysis) infusions the fountain syringe with an aspirating needle is all that is required. The solution is infused into the sub-mammary or thigh tissue, using gentle massage to hasten the absorption. It is hardly necessary for me to remind you that the salt, the solution and all instruments as well as the hands of the operator and assistants should be rendered aseptic; this is equally true of the field of operation. For the rectal injection (entero-clysis) we need only a syringe with a rectal nozzle and the solution. Nothing needs to be sterilized, and is ready both in the most rural district and the metropolitan hospital; consequently no one is excusable for not having used this life-saving agent.

The Solution.—We generally accept that the solution consists of one hundred and five grains of salt dissolved in thirty ounces of water, both sterilized. For all practical purposes one teaspoonful of salt to one pint of water will be near enough the correct strength. The temperature of the solution should be about 110 F. So that it will be near the temperature of the body by the time it passes through the tubing. A lower temperature will do more harm, as the patient will have to raise the temperature of the solution to that of the body heat. A higher temperature will do harm by producing a necrosis of the tissue at the site of introduction. I have seen a large slough of the mammary gland from this cause.

The force used for the intra-venous method should be that of holding the bag about three feet above the patient's body. The quantity of the solution to be used depends upon the effect upon the patient, usually from a pint and a half to a quart. I have used three quarts in the veins and others have used a like quantity. Under the skin any quantity may be used that you can insert. You can infuse in more than one locality, so that absorption will go on more rapidly. Don't try and infuse in the veins too rapidly, about an ounce a minute will be fast enough.

2706 Grace St., East.

Have we a True Nerve Tonic ? *

By Robert F. Williams, M. A., M. D., Richmond, Va., Professor of Materia Medica and Therapeutics in the Medical College of Virginia.

In considering this subject we must first define two general terms which, though differing essentially in meaning, are both often too loosely used and frequently improperly interchanged.

How often do we see the expression "Stimulants and Tonic" as a joint classification for certain drugs, and yet what could be more different than the manner in which these two classes of drugs produce their effects and the consequent difference in the indications for their administration? Gould's Dictionary defines the word tonic as "a medicine or agent which promotes nutrition and gives tone to the system", or in other words a tonic is a regenerator, "promoting nutrition" i. e. increasing the repair of physiological or pathological waste of tissue substance.

A stimulant, on the other hand, is defined by the same authority as "an agent which excites the functions of an organ", an agent, therefore, which increases the physiological tissue waste.

This promotion of nutrition may be accomplished indirectly or directly. Indirectly by regulation of the diet and the use of such drugs as will stimulate the digestive functions and promote assimilation. Directly by furnishing to the body in the form of medicine such ingredients as are lacking in the special tissues involved. Dietetic and hygienic treatment is in many conditions sufficient to restore the lacking "tone" to the system, but in those chronic affections in which special systems of the body are lacking in the essential material of their composition, we must seek to rebuild by the direct method. Would any one of us be satisfied to treat a marked case of rachitis by diet alone, without the administration of calcium in some proper form? Or would not the physician be justly criticised who failed to prescribe iron in an assimilable preparation in a profound case of anemia or chlorosis?

Again whereas the food administered may contain the essential ingredients for a given condition, it may not contain them in sufficient quantity to meet the demand, and the very condition of physical and function-

al weakness which we are seeking to restore often prevents the appropriation by the tissues of these ingredients in the forms in which they are found in the food. It becomes then the physician's duty to supply the lacking material in such forms as can be utilized by the weakened tissues for which they are intended.

Being called during the past year to a series of those obscure and discouraging conditions, hysteria and neurasthenia, I was brought face to face with the question as to whether or not we had a true nerve tonic, and was thus led to study some of the drugs commonly prescribed in chronic nervous affections of this class.

Though the etiology of these conditions is obscure and the ordinary pathological studies fail to explain the cause, modern chemistry has given us an explanation in discovering in them a deficiency of lecithin which is the essential material in the structure of nerve tissue. This material we are told by the chemists is an organic phosphorous compound which is chemically a phosphorized fat.

Any idea of treating these diseases dietetically alone will soon have to be abandoned for in most cases digestive derangement, due to the depressed nervous condition, soon appears and limits the possibilities in this direction. We must then resort to drugs, but what shall we use? In considering this question, I do not propose to include drugs, however valuable, which promote the nutrition of nerve substance indirectly, but I shall limit this paper to the study of the most important preparations which have, or are supposed to have, direct tonic properties for nerve tissues and are therefore best suited for use in chronic nervous conditions.

Most works on "Practice" recommend strychnine, yet the authorities on *Materia Medica* tell us that strychnine is a nerve stimulant, but fail to mention any direct tonic effect. In certain mild conditions in which the manifold body functions are below par, strychnine has indirectly the effect of a tonic, in that by its stimulation of the digestive functions it induces the consumption of more food, and by its stimulating action on the heart and nervous system with the resultant improvement in circulation and increase of vital reflexes, it sustains the patient for a brief period during which the weakened tissues are restored by increased nutrition through food, which is better assimilated on account of the greater functional activity of the organs excited by the stimulant action of the drug. But in chronic conditions, such as hysteria and neurasthenia, strychnine proves a poor re-

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liance for even this indirect tonic effect, for the text books and our own clinical experience have taught us that we should suspend the administration of the drug after a brief exhibition of a few weeks, since prolonged use by overstimulation causes depression of the nerves, exhausting them and thereby increasing their reflex excitability, in other words producing the very symptoms which we are seeking to relieve.

Drugs having direct tonic effect on any system all act slowly e. g. calcium in rachitis, iron as a haematinic. I can see no reason to suppose that worn out nerves will respond more readily to an appropriate tonic than that exhausted blood should. On the contrary, clinical experience has shown that the repair of weakened nerve tissue is one of the most tedious processes that we undertake to direct. I can, therefore, see no foundation for the claim of some writers that strychnine is a tonic to nerve tissue, for strychnine acts promptly and quickly, producing its effects markedly in an hour or two. This very character of its action, if there be anything in analogy, must suggest at once a question with regard to its tonic properties from its strange unlikeness to other tonic drugs. A single dose of strychnine will produce a sense of increased vitality and if it be not repeated sufficiently soon, lassitude will supervene. But the direct tonics act insidiously and the patient cannot tell when a feeling of increased vigor began, but is simply conscious of a change which is permanent. For the paroxysms of nervous depression that occur in hysteria and neurasthenia, strychnine is an excellent stimulant for temporary and occasional use, but to depend upon it in the tedious undertaking of rebuilding a shattered nervous system can but lead to disappointment, for both patient and physician.

Arsenic is frequently prescribed in these and allied conditions, but, though it exerts an indirect tonic effect like strychnine and is beneficial in certain conditions of brief duration, its continued use in chronic nervous diseases of this character, I consider questionable. For by its persistent use in even small doses there is danger of chronic effects being produced such as "impaired gastro-intestinal vigor, various disorders of the skin, irritability of the nervous system, neuritis and paralysis". Such a possibility should make us hesitate to enter upon a course of treatment which, if not speedily efficacious, is liable by its continuance to increase the severity of the conditions which we are seeking to cure.

The fact that there are in Syria and some other countries classes of people who habitually use arsenic, is not sufficient

ground for us to risk its long administration. For although it is said that these arsenic-eaters suffer no harm from the practice, recent studies have shown that they are by no means immune to arsenical poisoning, but that deaths from this cause are not uncommon. And while these people can persevere the practice with some impunity, it has been observed that the Anglo-Saxons are far more liable to succumb to the fatal results of the habit.

That certain forms of neuralgia are cured by arsenic is undoubted. But consider a moment the manner which such cures are accomplished.

Regarding the use of arsenic in neuralgia the National Dispensatory makes this statement: "The advantages of arsenic in neuralgia, especially of the fifth pair and of the intercostal nerves, the forms which most usually depend upon constitutional or acquired debility, have been recognized ever since they were first pointed out by Fowler. It is true that the cases most readily cured by it are those of miasmatic origin, but whether the disease depends on miasma as a direct effect or upon its indirect influence and the consequent anemia is not clearly determined". The well known efficacy of arsenic in malaria in destroying the plasmodium will explain such cures if due directly to the miasma as a cause, and this should be expected, if Ringer's statement be correct that the drug is a protoplasmic poison. But it is not due to any direct effect on the nerve tissue.

On the other hand, if anemia be the cause, the cure is brought about by the effect on the blood tissue. The Dispensatory calls attention to the fact that "facial and intercostal neuralgia are precisely those (cases) in which iron is an efficient agent". How then does arsenic improve the blood? Not as iron does directly by supplying an essential ingredient of that tissue, for arsenic is not an ingredient of normal blood. Ringer states that "in simple anemia it seems to cause an increase, at first, in both red and white corpuscles, but after a certain point has been reached, there is a steady diminution in both". Such an effect must evidently be due, I think, to a stimulant action on the blood making organs "causing an increase at first" which is followed, if the drug be continued, by the depression due to overstimulation, for "after a certain point has been reached there is steady diminution in both". The idea of a stimulant action is verified by Ringer's further statement that the effects of arsenic are remarkable in splenic leukæmia and Hodgkin's disease, but that, "in each case large doses to the limit of tolerance may be called for", in

other words, reaching a depressant effect on these inaccessible organs by over stimulation. Such effects being fairly deducible as due to stimulant action, I think we may safely infer that the effects upon the nerve structure are also stimulant and in no sense directly tonic, since we find as stated above the continued use producing irritability, neuritis and finally paralysis, reproducing the picture of stimulation, overstimulation, depression.

Rational therapeutics will at once suggest the administration of phosphorus to replace the deficiency in the nerve tissues by its direct introduction. But here we are confronted by the difficulty of providing a suitable preparation. Concerning phosphorus the National Dispensatory makes this statement: "It is absorbed mainly without change and a very minute proportion of it is oxidized in the system. Its administration occasions a very small increase, if any, in the urinary phosphates, and when we remember that a man excretes daily not less than 54 grains, it is inconceivable that the minute quantity in which it is possible to administer free phosphorus can have any material influence upon the proportion of phosphorus compounds in the tissues. Whatever action it possesses seems fairly attributable to a molecular irritation which, if carried too far, results in tissue transformation and physiological death. Phosphorus is a rapid stimulant but it acts by causing waste and not by increasing power; it impoverishes and does not enrich. It momentarily galvanizes, as it were, the torpid functions, but is incapable of renewing a delapidated constitution, or even a nervous system exhausted by chronic disease".

The hypophosphites are often prescribed in these chronic debilitated conditions of the nervous system, but that they have any direct tonic effect on the tissue is very doubtful. Cushny says: "The hypophosphites have been used in therapeutics in the belief that they had some influence on nutrition. They were formerly supposed to be oxidized in the tissues to the phosphates, but this has been shown to be incorrect as practically the whole of the hypophosphite administered can be recovered unchanged from the urine. There is no ground to suppose that they have any further action than the other indifferent salts". Hare states that the only advantage of the hypophosphites over phosphorus is in the ease of administration. Ringer says: "Chemically the hypophosphites are nearer to free phosphorus than are the phosphates, and their mode of action seems, in accordance with this, to resemble somewhat the action of free phosphorus. They are generally regarded as

alternatives in the same sense that phosphorus and arsenic are alternatives". The National Dispensatory considers that improvement under the use of the hypophosphites is chiefly due to the associated treatment, stating further that on theoretical grounds calcium hypophosphite "is supposed to possess a power of stimulating and regenerating the nervous system".

My own experience is the use of the hypophosphites agrees very closely with the statements of these authorities, for I have not observed any direct tonic effect on nerve tissues.

In the past twenty years all departments of "the healing art" have made wonderful advances approaching daily more and more nearly to the position of an exact science. The developments of bacteriology and pathology, the improvements in surgical procedures, the increased accuracy of medical diagnosis by more exact methods have in modern times attracted the notice of the world. And last and of equal importance with their forerunners, modern materia medica and pharmacy are improving to meet the new standard. I know of no single instance by which this advance is better illustrated than in the introduction of the glycerophosphates, organic compounds of phosphorus.

These preparations, first introduced to the profession in 1894 by Dr. Albert Robin, of Paris, have grown in popularity with the profession wherever they have been used, as the many favorable reports by French, German and American therapeutists have shown. Theoretically they seem almost ideal. Clinically they have proven practically efficient.

Dr John D. Quackenbos in a paper entitled "Causes and recent treatment of neurasthenia" in speaking of lecithin, the constituent of nerve tissue, which is deficient in this and allied conditions, says: "It is a constituent of every cell in our bodies, but is especially characteristic of those that make up nerve substance. Chemically lecithin is a glycerophosphate of neurin—neurin constituting the albuminous basis of nerve tissue, and occurring in the gray granular vesicular nervous matter, and in the white fibrous nervous matter. In combination with cerebrin it constitutes protagon, the principal form in which it is met with in the brain." Thus we have in glycerophosphates artificial compounds nearly identical with those which nature forms. Dr. Robin after prolonged study of neurasthenia and continued observation of phosphatic leakage in this affection, conceived the idea of treatment by replenishing the waste due to leakage instead of attempt-

ing to stop the leak and so experimented with these preparations for many years before reporting his results.

Theoretically this direct provision of a pabulum for nerve tissue which requires no chemical change, or but a slight one, before incorporation by the tissues, is a thing beautiful to contemplate. But it is just concerning the chemical change that the theory is perhaps weak. It is one thing for chemistry to analyse the nerve substance and discover its characteristic ingredient, lecithin, or having discovered this, to prepare artificially a substance as nearly identical as the sodium or calcium glycerophosphates. But it is quite another thing to trace the progress of so complex an organic molecule through all the varying chemical atmospheres, under whose influences it must be brought during its journey from the lips to its ultimate resting place in the body structure. That the preparation pursues its course unchanged, however, or that such changes as occur in the acid medium of the stomach are corrected in the alkaline medium of the intestine or blood, would seem probable from the fact that the action of the drug is identical whether administered by mouth or by hypodermic injections.

The reports of many observers testify to the efficacy of these preparations in a wide range of conditions, which is not surprising since healthy nerves mean so much in the proper functional activity of our complex organism. My own experience with the glycerophosphates covers a period of little more than one year. It was brought to my notice by Dr. Allen Starr of New York. The first case in which I observed it was one of hysteria which was of seven months' standing when the use of the preparation was begun. Pretty much all the drugs in the catalogue had been used in this case with no improvement. Strychnine, arsenic, gold, the hypophosphites, phosphoalbumen, valerian, musk, monobromate of camphor, asafoetida, guarana, sumbul, all had a trial but proved inefficient. The sodium glycerophosphate was administered in about a ten grain dose three times daily. During the first month no improvement was noted. At the end of three months the patient was markedly better, the change having been gradual and imperceptible from day to day. There was simply a diminution of the severity of the symptoms, with occasional mild exacerbations. Toward the end of the fifth month of this treatment the patient underwent a more severe exacerbation than had occurred in several months. This lasted two weeks when marked and rapid recuperation took place, and in another week the patient was

well and has continued so, being now, indeed, in far better general health than for many years past.

My second trial of the drug was in a case of neurasthenia, brought on by overwork, in a man above sixty years of age. Four months use of sodium glycerophosphate restored him to mental and physical activity and he now conducts his business with more vigor than he has in several years and is in excellent health and spirits. In this case the noticeable improvement began after about three weeks use.

I was so pleased with the results in these cases that I thereafter immediately prescribed the glycerophosphate on making a diagnosis of hysteria or neurasthenia. I have during the past ten months treated some twenty-five cases of these conditions of varying severity. In one case there was some improvement, but not marked, in the three months that it was under my observation. After that time it passed out of my care and I have not heard since from the patient. Five or six of my cases, while showing great improvement, have not been long enough under treatment to effect a cure yet. One case after a month's treatment with no improvement dismissed me. All of the others I consider cured, since they have gone now many months since the administration of the drug was abandoned, without any recurrence of their previous symptoms. The only difference that I have made in my use of the drug since my first experience with it has been to increased the dosage in some cases, giving as much as fifteen to twenty grains of the sodium preparation or substituting in its place the calcium salt. Of course I do not neglect proper dietetic and hygienic treatment, nor have I abandoned the use of strychnine or valerian or some other antispasmodic for temporary stimulant effect when they are indicated. But for curative and tonic effect I have come to rely on these organic preparations.

In several cases of impotence due to sexual excesses, I have relieved the condition by a few week's use of the glycerophosphates.

I have now under treatment with these preparations three cases of gastric disturbance. One is a "nervous dyspepsia", pure and simple. The other two are cases of chronic gastritis in which, although the conditions of the local mucous membrane and secretory apparatus have been restored there remains a disturbance of the nerve mechanism. Though these patients have been taking the drug for only three or four weeks, their progress is very satisfactory and I am confidently expecting good final

results, although strychnine and the bitter tonics failed in these cases to improve the condition after many weeks of trial.

The use of these preparations is attended by two disadvantages. One is the slowness of their action. Their effects are rarely seen under three or four weeks administration, though in one or two instances I have had patients report improvement in a week or ten days. This disadvantage, however, is not peculiar to those preparations for in such conditions as those in which I have used them, all drugs act slowly, but the effects of the glycerophosphates are lasting. The other disadvantage is their comparative expense.

I have used hitherto only the sodium and the calcium salts, but many other combinations with potassium, lithium, magnesium, iron etc. are procurable, and I shall use them when they seem specially indicated.

From this brief comparison of the action of the preparations considered on nerve structure I reach the following conclusions:

1. That for long continued use in conditions of weakened nerve power, strychnine, arsenic, phosphorus and the hypophosphites are unsuitable on account of the ultimate depressant effect which their continued use may occasion, which should be avoided.

2. That in the glycerophosphates we have preparations so nearly identical with the natural phosphorus compound of nerve substance as to be more readily appropriated by depressed nerve tissue than any other phosphorus preparations.

3. That this near identity of the glycerophosphates with lecithin and the absence of nerve stimulation produced by their administration render them true nerve tonics.

4. That the success met with by those of the profession who have used these preparations entitles them to trial by the profession generally.

508 East Grace Street.

Syphilitic Gangrene (?); Case Involving Scrotum and Perineum.*

By William Richmond Lowman, A. M., M. D.,
Orangeburg, S. C.

The brief clinical record of the case which I will present to you to-day is somewhat of a novelty to me and something the like of which I never came in contact with either in actual practice or in the medical or surgical records which it has been my

fortune to peruse. Therefore it is not with the purpose of enlightening but with the idea of inducing discussion whereby I may receive light by those with more experience and wisdom than your deponent enlarging on the features of this or similar cases.

The case aroused my deepest interest and as you will observe in the title of this paper that there is considerable uncertainty in my own mind as to the aetiology of the case and consequently as to its correct classification. Let me therefore sketch this case as briefly as possible in order that I may pave the way for the "wisdom of your words."

CASE.—White Farmer, aet. 47 years., of plethoric habit, personal history of excessive venery, dissipation and syphilitic dyscrasia. Called 7th. May last and found patient suffering with something like an abscess to the right of and on a line with the anus, with centre about 4 cm. from same over the ischio-rectal fossa, having a diameter of 6 cm. It was not especially elevated at any point; color, red in centre fading to pink at the edges; somewhat painful to the touch no fluctuation; slight febrile movement.

On the 8th, same symptoms aggravated, color deeper, temperature $100\frac{1}{2}$ deg.

On the 10th., similar condition, color centre bluish, temperature 100 deg.

On the 11th., like state, centre bluish-black, red to ragged demarking line, red line 5 mm. in width extending anteriorly about $4\frac{1}{2}$ cm. then crossing the perineal raphe to the left side; temperature 102 deg.

On 12, 13, 14, and 15th., Symptoms much aggravated, slough rapidly extending at original site from centre to edges of demarking line, the red line of infection extending anteriorly on the left side of median line of perineum on a line with the external side of left crus to the base of the scrotum, after reaching same spread over the left side of the scrotum—much redness, heat and swelling of scrotal sac on the left or involved side; temperature rising to 104 deg. on the 15th., tongue heavily coated, some delirium.

From 16 to 21st., twelve visits—constitutional symptoms gradually modified, slough forming on the left of anterior scrotal surface, demarked line of inflammation from 1 cm. junction of penis and scrotal sac down to the middle of the inferior surface—in the meantime, the entire demarked surface of the first site of inflammatory action near anus completely sloughed out, deepest in centre, all cellulose-cutaneous and other tissue in centre of this site destroyed down to Levator Ani muscle, gradually rising from centre to the cutaneous surface at the edge.

From the 22nd. to 25th.—sloughing of scrotal sac begins anteriorly at two points

*Read before the Tri-State Medical Association of the Carolinas and Virginia, held at Charleston, S. C., February, 1900.

1 cm. apart near centre of inflamed area, also another slough forming at posterior base of scrotum on the line in which the infection spread.

25th- to 30th.—all scrotal tunics sloughed thro' exposing lower end of left testis,—Slough 9 cm. length anteriorly of skin, 6 cm. of subcutaneous tissue and Cremaster muscle, $3\frac{1}{2}$ cm. of Tunica vaginalis.

June 1st. to 12th.,—No additional slough, moderate suppuration, gradual granulation; all constitutional symptoms subsiding—gradual reformation of destroyed tissues—no adhesions to testis but some adhesions of tunics and muscle in reproduced area.

REMARKS :

Thus we have in this case a progressive localized necrosis of cellular and connective tissues,—an areola of red inflamed tissue circumscribed 6 cm. in diameter, centre 4 cm. to the right of anus, eventually sloughing into deeper tissues over entire area, passing forward for 3 cm. crossing the perineal raphe on a line with the posterior edge of the superficial transverse perineal muscle and thence to posterior base of scrotum, where another area of about the size of a silver dollar was involved, and then proceeding anteriorly around the left side of the scrotum, involving all of left side of same anteriorly, sloughing into and destroying Skin, Cremaster muscle, Spermatic fascia and Tunica vaginalis, laying bare lower end of left testis, but not involving it.

The inflammatory action and destruction of tissues was complicated by much systemic disturbance from general toxæmia. The case responded to local antiseptic and to general tonic constructive medication with a mixed specific treatment. Locally warm lotions of Hydrogen di-oxide was used until after separation of sloughs, then Aristol was applied freely. Constitutionally, Basham's mixture was used in conjunction with Salol, Phenacetine and Quinine until the destructive processes ceased, then the Four Chlorides until entirely recovered.

Now what was the aetiology? There was no point of local infection discoverable, nor history of any, where an erysipelatus germ could have found an entrance and have produced Phlegmonous Erysipelas; there was no ulcer by which a Phagaedena could have developed; there was no fistular connection with the rectal tract at the first site of inflammation, tho' such an opening might have previously existed and then been closed by inflammatory action. It is possible that faecal infection might have originated the trouble and then the spread been superinduced and aggravated by the dyscrasia

existing from previous excessive venery, dissipation and syphilis.

I might mention that there had been a small fistulous tract on the opposite side of the rectum about 15 mm. from anal orifice extending upward and to the right entering the rectum between the sphincters, which was treated concomitantly by injections of warm solutions of Pyrozone until all suppuration and discharge ceased, then several injections of Churchill's Tr Iodine along that tract perfected a cure, with no reappearance of the fistula up to the present time. The patient had also suffered from two external Hemorrhoids which were afterward obliterated by carbolic injection.

Ovarian Cyst in the Negress—Report of Three Cases.*

By H. A. Royster, A.B., M.D., Raleigh. N. C.

The occurrence of ovarian cysts in negro women is sufficiently rare to, at least, justify reports of cases as they are seen from time to time. Many surgeons of large experience in operations on colored people have never met with these tumors. Compared to uterine fibroids in the same race, they are exceedingly uncommon, and are likely to be slighted in the diagnosis of doubtful abdominal enlargements.

The most recent and valuable statistics on this subject have been collected by Dr. Stone, of Washington, in a paper read last year before the Southern Surgical and Gynecological Association.

His inquiry revealed the fact that sixteen prominent operators in the South had never "seen in a negress an ovarian cystoma, single or multilocular." A few found these growths in mulattoes, while uninocular cysts were shown to be somewhat more common in both the black and the "mixed" negro. All the evidence except that from a very important medical centre—New Orleans—goes to prove the rarity of ovarian neoplasms in the negress. Dr. George Ben Johnston, who was reported by Dr. Stone, as not having seen a case of this kind, has kindly sent me the histories of four cases since operated on successfully by him, one being a multilocular cyst in a mulatto woman.

During a practice of four years, three ovarian cysts in the negro have come under my observation—two in genuine negroes, one in a mulatto. These cases are presented

*Read Before the Second Annual Meeting of the Tri-State Medical Association of the Carolinas and Virginia held at Charleston February, 1900.

here not with the idea of offering anything new, but as an additional contribution to this question and with the intention of introducing the subject for discussion. It seems not an inappropriate theme for this occasion, when the "American Negro" is the special topic under consideration.

The three cases were as follows:

1. W. P., almost black negro, age 43, large multilocular cyst; operation by Dr. A. W. Knox, through whose courtesy, this case is included. Recovery.

2. J. G., mulatto, age about 35; very large cystic tumor with characteristic history and physical signs. This patient even after being admitted to the hospital and prepared, refused to be operated upon and was discharged. The diagnosis could not, therefore, be confirmed, but the condition was plain.

3. H. H., black, 28; unilocular parovarian cyst, springing from the left side. It was wedged down behind the uterus, adherent to the fundus and to the posterior wall, and growing between the layers of the left broad ligament. There was an abscess of the right ovary. Recovery.

Tucker Building-

Nose and Throat Affections.

By C. H. Powell, A. M., M. D., Professor of Physical Diagnosis and Clinical Medicine, Barnes Medical College, St. Louis, Mo.

Now that the season of the year is upon us at which time disturbances of the nose, throat and lungs are predominating an article calling attention to the different affections, their causes, pathological characteristics, and treatment, is certainly of practical importance. Nasal involvement is certainly the most common morbid phenomenon we meet with of every degree from simple congestion of the Schneiderian membrane to ulceration, hypertrophy, and deflection of the nasal septum. One of the first indications that a trouble exists in the nose is indicated by the presence of nasal discharge.

The most common discharge observed occurs from a simple cold, or more technically termed, an acute rhinitis. This troublesome affection usually begins as a dryness of the Schneiderian membrane, which has as an accompanying condition a vaso-motor constriction, the blood-vessels are accordingly emptied of their contents, and as a consequence the function of the parts supplied by the blood is temporarily suspended. This cessation of function,

however, does not persist longer than twelve or twenty-four hours, when the blood vessels resume their function, but to an extent greatly in excess of what previously existed there is then a greater amount of blood carried to the parts, and as a result we have the escape of the watery element manifesting itself in the shape of a large discharge of mucus which, from the fact that it follows an inflammatory process, is in a strict sense an exudation, not a transudation. This flow of mucus is usually very profuse, causing the patient to be continually using his kerchief, which is saturated with the discharge. The attack is often ushered in by repeated attacks of sneezing, headache, and a sensation of fullness in the frontal sinus; these unpleasant sensations usually are markedly relieved as soon as the discharge of mucus is well established. This first state of morbid activity on the part of the nose gives us in a most typical form the symptoms described as an acute nasal catarrh. For the relief of such an acute condition the indications to be met consist in applying an agent or agents that will constrict the blood vessels, and at the same time destroy the germs associated with the discharge. Having accomplished this, the inflamed mucous membrane should be protected from the influence of the atmospheric irritants. As the treatment usually employed by me is quickly, and often permanently satisfactory in correcting this trouble I will outline the *modus operandi*.

In the first place I provide myself with a Mulhall-Warner Nasal Douche, which has a long curved tip for insertion up behind the uvula. I find this simple instrument of signal utility in the treatment of all nasal difficulties. I now prepare a solution one part of Glyco-Thymoline (Kress) to six parts of luke-warm water, and wash out the nose thoroughly; having accomplished this I next spray the nares thoroughly with a solution of cocaine, ten grains to the ounce, and then complete the treatment by throwing into the nose, with a De Vilbiss instrument, some heated vaseline, which soothes, protects, and keeps the constricting influence of the cocaine solution in situ for a considerable interval. I seldom find it necessary to repeat this treatment more than once or twice. The relief experienced in every instance is prompt, and grateful to the patient.

There is another class of patients who are sufferers from a chronic nasal discharge whose condition is due to the occupation engaged in, thus those who work in factories where the air is continually loaded with dust and debris, being constantly exposed to the irritating influence of these particles

the nasal disturbance is perpetuated. In this class of cases the same plan of action is referable, namely, first, thorough cleansing of the nose with Glyco-Thymoline (Kress) solution in the same strength as before and the after application of an unguent.

A very useful remedy that gives well-marked beneficial results is a four per cent. menthol and alboline mixture, which is a very efficient and cooling ointment, that being liquid can be readily sprayed upon the nasal mucous membrane.

There is still another class of cases that are very persistent in resisting different kinds of treatment. I refer to what is technically known among the people as chronic nasal catarrh. In this class of subjects the pathological state of the nose is to be carefully enquired into, as the catarrhal discharge is only a symptom of something else, this something else constitutes the disease to be treated. In one case it will be found to be an hypertrophic rhinitis, in another a stenosis of one of the nares from a deflected septum, and in a third case, especially in the case of a child, the presence of a foreign body, a tumor, or a polypus. Treatment of the nasal discharge, therefore, to be efficacious should consist in directing attention to which ever one of these or other conditions are found to be responsible for the catarrh. In all cases, however, due to whatever cause, the action of Glyco-Thymoline (Kress) has impressed me most favorably. I will outline a half dozen cases wherein I have derived the most gratifying results from this remedy.

Case first.—“ACUTE RHINITIS.”

A lady consulted me with a very bad cold which had been persisting to her intense annoyance for several days. She called upon me in the belief that the difficulty was increasing instead of diminishing. Posterior nasal washing was at once done, using Glyco-Thymoline (Kress) in warm water, one part to six, and the nasal fossæ sprayed with cocaine solution, patient was also given a six ounce bottle of Glyco-Thymoline solution, and advised to apply with an atomizer three times a day. Recovery was prompt and thorough under its use.

Case second.—“HYPERTROPHIC RHINITIS.”

This case was in a man who worked outdoors in all kinds of weather. In addition he was an inveterate tobacco user, smoking as many as two dozen pipes of tobacco daily. He was also subject to great relaxation of the pharyngeal structures, had a cough, enlarged tonsils, and was a terrible snorer, sleeping with his mouth open. This pa-

tient was treated with Glyco-Thymoline (Kress) in solution, and the throat frequently gargled with a fifty per cent. solution of the same remedy. Internally, quinine, iron and strychnia were given him, and he was advised to lessen the amount of tobacco he was consuming. He was also told to dress more warmly. The outcome of the case was very slow, but an uneventful recovery took place.

Case third.—“TOBACCO PHARYNX.”

This patient came to me for an annoying cough, which upon inspection I discovered was due to an intense hyperæmia of the pharyngeal structures. He was given a twenty-five per cent. solution of Glyco-Thymoline (Kress) and instructed to gargle his throat often with the medicie. I saw him a week later, and he advised me that very much to his own and his wife's delight the cough had entirely disappeared.

Case fourth.—“DIPHTHERIA.”

I have used Glyco-Thymoline (Kress) in cases of diphtheria with good results. My favorite combination is composed of the following: Glyco-Thymoline, 50 per cent., Per Oxide of Hydrogen, 50 per cent., for use in the atomizer every hour or so. Although mentioning this under case fourth, I will not specify any particular case, as I employ this prescription in all cases of diphtheria. Of course, Glyco-Thymoline (Kress) has no specific influence in diphtheria other than a strong, reliable and harmless antiseptic.

Case fifth.—“CHRONIC GASTRITIS.”

Having satisfied myself of the signal utility of Glyco-Thymoline in the previous conditions outlined, determined me to test its efficacy in the operation of lavage. A few days ago a conductor on a street railway in St. Louis, came to my office complaining with chronic gastric disease. He had a foul, coated tongue, and said he always felt bloated after meals. I employed lavage, using sodium bicarbonate and Glyco-Thymoline (Kress), using two tablespoonfuls of soda and six tablespoonfuls of Glyco-Thymoline to a quart of hot water. The patient experienced so much relief from this remedy that he returned unsolicited four days later and asked that I repeat the process, which I did. He sent me several other railroad men, and the results in each case were the same.

Case sixth.—“ACUTE CYSTITIS.”

A gentleman who sustained an injury to his spinal column, from suddenly alighting from his bicycle, had as a result paralysis of his lower extremities in which his bladder participated, was troubled with acute

cystitis and its concomitant evils. For the correction of this his bladder was irrigated with a tablespoonful of Glyco-Thymoline and a tablespoonful of boracic acid to a pint of warm water. It was not necessary to repeat this process more than three times when the relief was established, frequent micturition disappeared, and necessity for the continued use of the catheter was obviated.

These cases demonstrate, beyond a peradventure of a doubt, the therapeutic efficacy of Glyco-Thymoline (Kress) as a remedial agent.

Some Remarks Concerning the Infectious Nature of Tuberculoses and Measures for Prophylaxis.*

By Dr. Chas. L. Pearson, Asheville, N. C.

It is not my purpose to enter into the pathology of tuberculosis nor attempt to discuss at length its etiology. The subject of the Infectious Nature of Tuberculosis has been suggested to my mind, not only by personal observation of the great numbers who visit our city annually suffering from some form of the disease, and inhabit our homes and hostelries and visit our public institutions, but also by the fact that the laity generally are fully cognizant of its infectious nature, and are demanding for their own protection that more rigid measures for prophylaxis be taken. To substantiate this statement, let me cite to you the impression which prevails among the visitors who seek the mountains of Western North Carolina in the summer season not on account of any pulmonary disease, but to escape the extreme heat which prevails in the larger cities and the lowlands especially of the South. Is it not true that many of those who formerly came to our city are now going to neighboring towns, and when asked their reason for so doing their reply is, "I would not go to Asheville because there are too many consumptives there. I am afraid to go into a boarding house or hotel, which has been occupied during the winter by people who have some form of tuberculosis. My family physician has told me there is some danger that I may contract the disease by occupying a room which may be infected." A fact, which if it has not already done so, will tend to injure the future of our city as a place of resort, unless some active measures be taken by the medical profession here, to establish most rigid prophylaxis, especially among the boarding

houses, and thereby place ourselves on record as being a city where every possible precaution is taken then we can safely and conscientiously assure our visitors of a minimum risk of infection as well as that we possess a climate, equalled by a few and as we think surpassed by none of the resorts.

That the arguments which I have quoted are not alone without foundation, but are, to a certain extent true, it is my purpose to show by bringing to your attention some clinical facts which I have collected from various sources, concerning the infectious nature of this disease.

Tuberculosis is an infectious disease caused by the presence of a micro-organism called the *Bacillus Tuberculosis*. Osler has truly said, "Although the researches of many workers in the field of tuberculosis had left no doubt of the infective nature of the disease, it was not until the discovery of the bacillus by Koch in 1882 that the true nature of the parasite was known. In the seventeen years which have elapsed, much work has been done on the *Bacillus Tuberculosis* in its various relations, and from varying standpoints but the original work of Koch was so thorough and far reaching that our increase of knowledge has consisted in the elaboration of finer detail the essential facts remaining unchanged."

One of the most important etiological facts in connection with this disease is its wide-spread occurrence in animals from which man derives a considerable portion of his food.

Recent studies and improved methods of inspection have demonstrated the very wide spread existence of this disease in cattle. Quoting statistics "of 5297 cattle slaughtered in Maryland, 159 were tuberculous, and of 15,506 slaughtered at the Brighton abattoir near Boston, 29 were tuberculous. Careful inspection of herds has been made in some of the states and the tuberculin test employed to determine the existence of the disease. For the four years 1890-1893 inclusive the percentage of tuberculous animals among 132,294 oxen and cows slaughtered in Copenhagen was 17.7. At the Berlin abattoir, in the year 1892-1893, 21,603 animals out of 141,874 showed evidences of tuberculosis. In Great Britain, there are no satisfactory records to show the existence of disease in cattle. In sheep the disease is very much less common. The percentage at Berlin is about 1.5. Horses are rarely attacked and dogs and cats are not very liable to the disease. In other animals kept as pets such as rabbits and guinea pigs, the disease is very rare. Among apes and monkeys kept in confinement, tuberculosis is the most formidable disease with which

*Read before the Buncombe County, Medical Society, January 5th, 1900.

these animals have to contend. Tuberculosis is the most universal scourge of the human race it is estimated that in the civilized countries 1.7 of the deaths are due to this disease. Vaughan says "In the U. S. Census Report for 1890, 102,188 deaths were reported to be due to consumption." It is difficult to get accurate statistics as to the number of deaths due to other forms of the disease, but a low estimate one can say that at least 150,000 persons die annually in the United States of all forms of tuberculosis. An estimation based on the Census Report gives the total number of persons in this country effected with tuberculosis as 1,050,000, or one in every sixty of the population. "All of which serves to show the widespread existence of the disease among the lower animals as well as the human race.

The possibility of the direct transmission of tuberculosis has never been open to much doubt, but the methods of transmission and frequency are still under discussion. There are two opposing schools—the one claiming that "the disease *per se* is not inherited but only a tissue soil favoring development." Baumgarten and his followers claim that "in inherited tuberculosis actual tubercle bacilli have been carried over from parent and lodged in the tissues of the child, where under suitable conditions, they multiply and produce the disease." The followers of the school also assume that the tubercle bacilli can be latent in the tissues and subsequently develop when the individual resistance is lowered.

The possible methods of transmission of the germ in direct inheritance are three, transmission by the sperm, transmission by the ovum and through the blood by the placenta.

Most of the experiments which have been conducted upon the lower animals to prove the sperm transmission have been unsuccessful. Wolff conducted a series of experiments by injecting tuberculous sputum into the testicles of male rabbits and guinea pigs, and succeeded in obtaining foetuses conceived by them, but none of the results gave evidence of the existence of tuberculosis in the foetus. Gartner also experimented with females impregnated by males with tuberculous testicles and obtained negative results, but was able to show the possibility of germ infection by inoculating into the peritoneal cavity and causing only two out of nine canary birds to produce tuberculous eggs. Experiments by other observers all tend to show that the animals inheriting tuberculosis directly are in great minority. That occasional transmission can occur through the sperm seems to be demonstrated by a case reported by Larney. A woman

of thirty was delivered of a deformed foetus in whose spinal column a caseous focus containing tubercle bacilli was found. The woman was in perfect health, but her husband presented signs of tuberculosis. In order that the disease could be transmitted, it would be necessary that the tubercle bacilli should lodge in the individual spermatozoon which fecundated the ovum. While possibilities of transmission in this manner are extremely small, we know that the tubercle bacilli do occasionally exist in the semen. But such an occurrence must be the rarest, and the bacilliary transmission of tuberculosis by this means plays a most insignificant part.

The possibility of transmission by the ovum has been demonstrated. Baumgarten has in one instance at least been able to detect the presence of the tubercle bacillus in ovum of a female rabbit which he had artificially fecundated with tuberculous semen. The question, however, of what effect such inoculation would have upon the human ovum cannot, of course, be answered.

Probably the most constant method of transmission in congenital tuberculosis is through the blood current, the tubercle bacillus penetrating by way of the placenta. Some authors hold that in these cases the placenta itself is invariably the seat of tuberculosis and the presence of tubercle in the placenta has been demonstrated in several instances. But there are undoubtedly cases in which, with an apparently sound placenta, both the placental blood and the foetal organs contained tubercle bacilli, notwithstanding the fact that the organs also appeared normal.

The opponents of this theory of germinal transmission hold that in cases of hereditary tuberculosis, a special predisposition of the tissues exists towards the tubercle bacillus, though just what this predisposition is cannot be explained in our present state of knowledge. Perhaps the strongest evidence in favor of the predisposition theory is the fact that we know of instances where children, born of tuberculous parents, when removed from direct sources of infection have gone through life without a sign of the disease. An instance reported by Bernheim, may be interesting in this connection, of a family of seven children in which both parents were tuberculous. The second and fifth child, who had never lived with their parents, remained healthy and had healthy children of their own, while the children who did live with their parents died of tuberculosis.

"The question of heredity in tuberculosis can be summed up in these statements: that though cases of congenital tuberculosis

do occur, they are extremely rare, and in all probability most cases of hereditary tuberculosis are due to heredity of the soil and not to the inheritance of the germ; that tuberculosis is much more frequently transmitted in the maternal than in the paternal line."—(Osler).

Another source of infection is milk. It has been shown experimentally that the disease may be transmitted to young animals fed upon the milk of tuberculous cows. The pigs of a tuberculous sow have been found with intestinal tuberculosis of the most advanced grade. The prevalence of intestinal and mesenteric tuberculosis in children should suggest that the food supply may be the source of infection, hence the practice of drinking cows milk raw and feeding it to children without a positive knowledge of its source is not without danger.

In man, transmission by inoculation is chiefly met with in persons whose occupations bring them in contact with dead bodies or with animal products, butchers, tanners, demonstrators of morbid anatomy, are liable to a local tubercle of the skin, particularly of the hands. This form of a local tuberculous process should be classified with lupus, with which, in general character, it appears to be identical. The disease has been inoculated in various other ways, local tubercle has resulted from the perforation of the lobe of the ear for ear-rings, also the bite of a tuberculous patient has been followed by local disease. Inoculation has also occurred from a cut by a broken spittoon of a consumptive patient, and instances of infection have occurred by the transplantation of skin.

By far the most frequent mode of infection is by inhalation. It is well remarked by Cornet that "the consumptive in himself is almost harmless, and only becomes harmful by his bad habits." It has been fully shown that the expired air of consumptives is not infected. The virus is contained only in the sputum, which, when dried, becomes widely disseminated in the form of dust, and constitutes the great medium for the transmission of the disease. It is then that we encounter the great risk of infection by breathing into the bronchial tubes and lungs these germs which frequently find lodgment in a soil fertile for growth and development. In the last stages of consumption the patient becomes weak and it is often the case that the sputum is imperfectly expelled—pillows, sheets, and handkerchiefs are soiled, as well as the carpets or rugs, and, if a male, sometimes the beard or moustache is smeared. Such circumstances all tend to the production around

the patient and attendants of a halo of infection.

Cornet has shown that the dust of rooms, hospital wards, and other localities frequented by patients with pulmonary tuberculosis contains the bacilli and is infective.

The observations of Strauss shows how these bacilli may be found in the air passages of perfectly healthy individuals. Attached to particles of dust the bacilli gain entrance to the system through the lungs, which may be regarded as the great portals of invasion. In institutions such as jails, barracks, and convents, where the occupants are restricted from that important element, fresh air, tuberculosis is especially prevalent. The more perfect the prophylaxis and hygienic arrangements of an asylum or institution, the lower the mortality from tuberculosis.

In the Alabama Insane Asylum, during a period of three years and nine months, of 295 deaths, 28 per cent. among the whites, and 42 per cent. among the negroes, were caused by tuberculosis.—(Bordurant).

In institutions of this sort, in addition to the presence of bacilli, the lowered vitality, and, in persons, the mental depression, must lower the resistance. The death rate from phthisis is estimated at 15 per cent. of the total mortality, while in prisons it constitutes from 40 to 50 per cent., and in some countries, as Austria, over 60 per cent. In a single ward, in the city of Philadelphia, Flick studied the distribution of deaths from tuberculosis for 25 years. He found that not less than one-third of the houses became infected during this period, and more than one-half of all the deaths from this disease during the year 1888 occurred in these infected houses.

Individual predisposition, age, sex, certain diseases and occupations may be mentioned as influencing infection. Hippocrates has described the so-called "Habitus Phthisicus" in the following terms: "The form of body peculiar to phthisical complaints was the smooth, the whitish, that resembling the lentil, the reddish, the blue eyed, the leucophlegmatic. and with the scapulæ having the appearance of rings." That the long, narrow chest, with depressed sternum is commonly seen in tubercular patients is true, but that there are many individuals with perfectly well-shaped chests who fall victims annually to the disease, is also true. The tuberculous or scrofulous diathesis upon which formerly so much stress was laid is now regarded as only a type of conformation in which the tissues are more vulnerable and less capable of resisting the disease. The disease occurs, as stated by Hippocrates most frequently from the 18th to the 35th

years, but no age is exempt. It is met with in the infant, and in the extremely aged. At different ages, different organs are more prone to be involved; thus, in the first ten years of life, the meninges, the bones, and the lymph glands are more frequently affected than at subsequent periods. That women are more frequently attacked than men is due to the fact that they live a more sedentary in-door life, and pregnancy and lactation are two conditions which are apt to lower the resistance of the organism.

Among the local conditions influencing infection may be mentioned catarrhal diseases of the respiratory tract, certain of the specific fevers, such as measles or whooping cough; typhoid fever is thought by some to predispose to tuberculosis.

It is a clinical fact that the occurrence of tuberculosis among the workers in mills, factories, mines, and among stone-cutters, glass-blowers, and others, whose occupations necessitate the inhalation of impure dust-laden air, which renders the lungs less capable of resisting infection, is very frequent.

Of the conditions influencing infection, environment is an all important predisposing factor. Dwellers in cities are more prone to the disease than residents of the country. Not only is the liability to infection greater but the conditions of life are such that the powers of resistance are apt to be weakened. Sunlight is one of the most important elements in destroying the bacillus, so that, in imperfectly ventilated dwellings and workshops, and in houses in close dark alleys, and in tenements, the liability to infection is very much increased. The influence of environment was never better demonstrated than in the now well-known experiment of Trudeau, who found that rabbits, when inoculated with tuberculosis, if confined in dark, damp places, without sunlight, rapidly succumbed, while others, treated in the same way, but allowed to run wild, either recovered or showed very light lesions.

I will not go farther into the subject, but will conclude with a few remarks in regard to prophylaxis. If the facts which I have been able to collect and so feebly present to your attention to-night, in regard to the infectious nature of this disease, prove anything do they not serve to show that the fears of many of our would be visitors are well founded, and when we consider the statement made by Nuttall, "that every patient in the stage of cavity, at a very moderate estimate will expectorate from two to four billions of bacilli, in the twenty-four hours the danger is by no means imaginary." The question then arises, should there not be some steps taken towards more thorough

inspection of the houses which are occupied by tuberculous patients, and more rigid prophylaxis enforced to prevent the risk of infection to those who may occupy rooms in such houses after they have been vacated by those afflicted with this disease. In bringing up this subject, I do not wish to reflect upon or dictate the duties of the physician who may be in attendance upon this class of patients, for it is presumed that he will give instructions to both the patients and attendants in regard to the necessity of disinfecting not only the receptacles containing the sputum, but also such articles as are liable to become infected, but it is true that a large number of patients come to our city relying upon the climate alone for benefit and consult a physician only in extremity.

Therefore it is for the protection of our own people as well as our visitors, and the good of the city, that some further measures be taken to lessen the danger of infection, arising from the careless or uninformed. A step in the right direction has already been taken by the enactment of the Anti-Expectoration Ordinance which was accomplished through the zealous efforts of some of our own members, but this is not far reaching enough it does not protect the homes and houses. Should not something be done to establish more perfect prophylaxis there?

Let me call your attention to some of the measures which have been adopted by the Board of Health at New York, which may prove of interest and benefit in this connection:—

"1. The department will hereafter register the name, address, sex, and age of every person suffering from tuberculosis in this city so far as such information can be obtained, and respectfully requests that hereafter all physicians forward such information on the postal cards ordinarily employed for reporting cases of contagious disease. This information will be solely for the use of the department, and in no case will visits be made to such persons by the inspectors of the department, nor will the department assume any sanitary surveillance of such patients, unless the person resides in a tenement house, boarding house, or hotel, or unless the attending physician requests that an inspection of the premises be made, and in no case where the person resides in a tenement house, boarding house, or hotel will any action be taken if the physician requests that no visits be made by inspectors, and is willing himself to deliver circulars of information or furnish such equivalent information as is required to prevent the communication of the disease to others.

2. Where the department obtains knowledge of the existence of patients with pulmonary consumption residing in tenement-houses, boarding-houses, or hotels (unless the case has been reported by a physician and he requests that no visits be made) inspectors will visit the premises and family, will have circulars of information, will instruct the person suffering from consumption and the family as to the measure which should be taken to guard against the spread of the disease, and, if it is considered necessary, will make such recommendations for the cleansing or renovation of the apartment as may be required to render it free from infectious matter.

3. "In all cases where it comes to the knowledge of the department that premises which have been occupied by a consumptive have been vacated by death or removal, an inspector will visit the premises and direct the removal of infected articles, such as carpets, rugs, bedding, etc., for disinfection, and will make such written recommendations to the board as to the cleansing and renovation of the apartment as may be required. An order embodying these recommendations will then be issued to the owner of the premises, and compliance with this order will be enforced. No other persons than those there residing at the time will be allowed to occupy such apartments until the order of the board has been complied with. Infected articles, such as carpets, rugs, etc. will be removed by the department, disinfected and returned without charge to the owner."

Shall not we, as physicians, be as active and zealous in our efforts to prevent infection as we are to battle with the disease itself? And shall we not do all in our power to place our city in the ranks with those where every possible precaution is taken, and make Asheville as safe a place of residence and resort as its climate is healthful and its situation beautiful.

14 Church Street.

DISCUSSION.

DR. C. P. AMBLER.—Mr. President and Gentlemen—I don't know that I can say very much unless I go over what has already been said. I agree with the doctor and take no exceptions to what he has just said. I agree with him in regard to heredity, and further agree that a child born of tubercular parents is prone to the disease. I think the doctor has dealt as freely with infection as I have ever seen. As for the most frequent mode of infection by means of inhalation and the food-tract is a question yet open for discussion. In fact, patients inhaling dust, isn't it possible for them to

take more germs into the alimentary canal than it is for them to take them into the lungs? And again patients coming along get sputum on their hands where tubercular patients have been inhabiting have free access to the alimentary canal. I do believe that a doctor handling tubercular patients should keep his hands away from his mouth. As to the expiration not containing germs I believe that the breath while coughing throws out globules of sputum and I think all physicians will agree that the patient will throw sputum on the head-mirror, and I do believe the breath contains sputum. I was struck very forcibly while visiting the Indian reservation. Dr. Godfrey assured me that out of several thousand half of this number was infected with tuberculosis, and he thinks that this is due to the Indians drawing their week's food from the Government. This naturally causes them to be trifling and they lay round and even eat their meats raw; besides the cattle that are purchased for them are mostly diseased. If we could carry out the doctor's means of prophylaxis it would be good, but I don't think it could well be done. In regard to the boarding houses I don't think there is enough care taken. I can't see why the official officers can't cause the public boarding houses to use the proper cuspidors. They refuse to do this because they don't care to advertise that they are taking tubercular patients.

DR. C. L. MINOR.—Thanking the doctor for the paper, I will say that I think every healthy man inhales tubercular bacilli. I believe with doctor Klebs that the alimentary tuberculosis is the most common. The germs get access in early life, even while a child from milk being taken up by the bronchial glands where the germ has a chance in early life to develop. There is a possibility of getting the sputum on the hands, as the doctor has just said. The sputum that is spit on the streets is possibly killed in twenty-four hours and it is the sputum that is left in the houses where the sun may never reach and where it is low, damp and unhealthy. The sputum coming to the physician from the patient while spraying would be direct infection. I believe the infection by way of the alimentary canal is more frequent than by inhalation. As a consequence we must look after the boarding houses. As a rule they are run by women and they fight any modes of prophylaxis in any way and a great many patients come without any physician, and I agree with Dr. Pearson that we must prevent this all if possible. How can you teach the boarding house to keep their house proper? In Denver they do nothing, in

Colorado they do nothing. Syranac Lake is the only place.

DR. J. A. WATSON.—I agree with the doctor in some details, but I have watched for years and I have never found a case infected here among our native patients, and I would not be afraid for my family to remain in any of the boarding houses, and I cannot believe it is such an infectious disease as it is so much talked and I would like to see some demonstration of this theory. I don't believe this is such a dreaded disease as so stated and when any physician can cite me to a case of infection here among our people then I am open for conviction.

DR. C. L. PEARSON.—Mr. President, in referring to some remarks that has been made some hold that the liability of infection by the alimentary canal is greater than by the respiratory tract. There is no doubt that many of us have swallowed thousands of bacilli while others have inhaled the same amount, but that does not prove that it lessens the infectious part. I agree with Dr. Ambler that while spraying little globules may be thrown out, but the expired air is not infectious. I have not suggested that the Board of Health of Asheville follow after the Board of Health of New York but some measures in that direction could be followed, and should be done, that the profession as well as the laity generally know that we are using every means to make our city as safe a place of resort as it is possible to do.

Uterine Fibroid.

F. H. Champneys (Lancet, Jan. 20, 1900), basing his statements chiefly on the records of five London hospitals, says that the mortality after operation for fibroids is 17 per. cent., while the mortality of fibroids apart from operation is 3 in over 2,000,000, or a little over .0001 per cent. In the natural course of events, therefore, fibroid tumors do not cause death, and, therefore, it is not necessary to remove them. Whether or not their removal is desirable depends on the merits of each case. Severe recurrent bleedings may render surgical relief necessary. Severe pain also calls for relief. Dangerous pressure symptoms are usually those causing retention of urine, and call for immediate interference. Rapid growth is often an indication for interference especially when accompanied by bleeding. A cystic fibroid grows persistently and should be removed. Malignant degeneration, although often talked of, is very rarely seen. There is a tendency at present to remove fibroids more freely. Operation is

unjustifiable unless the fibroid is dangerous to life, or destructive of the patients comfort and happiness, in which case the dangers of operation should be explained and the patient allowed to choose.—*Medical News.*

Huntington's Chorea.

Huyghe (Le Nord Medical, Jan. 15, 1900) describes minutely a case of this rare nervous disease affecting a man of thirty-nine years. The maternal grandfather, the mother, and an elder brother were affected in the same way at about the same age, while some sisters of younger age were still free from the disease. Beginning with a staggering, somewhat spastic gait, the legs, followed successively by the arms, head, and trunk, became subject to irregular involuntary incoordinated, and purposeless movements. These became more energetic when attention was directed toward the patient or when voluntary motion was attempted; yet no matter how violent, they were never followed by rigidity or fatigue. They could be suspended momentarily by the will, and in sleep ceased entirely, yet under excitement were very marked. Speech was explosive, somewhat scanning, and there was slight tremor of the face. Sensation was normal, the patellar reflex present, no ankle-clonus but there was abolition of the corneal and laryngeal reflexes. The intelligence was poorly developed, thought slow and he had a tendency to a fixed idea, yet was cheerful and sociable. Later on he developed a condition of dementia.—*Medical News.*

The Passing Away of the Pessary.

Under this heading the International Journal of Surgery for December editorially says: "There was a time within the memory of most of us when, if a gynecologist failed to devise a new pessary, his attainments in his specialty were considered as rather questionable. That they are potent for harm in unskilled hands is perfectly true still, the same might be said of pretty nearly every therapeutic substance or device of which we make use. The instrument dealers tell us that the demand for pessaries is unquestionably diminishing. Twenty years ago the budding gynecologist began with an armamentarium composed chiefly of cotton for tampons, and of a large and varied assortment of pessaries. He soon realized that in a majority of cases the best that could be said for them was that they were temporary makeshifts, and now and then when he was called upon to remove a long forgotten pessary that had

made raw and bleeding grooves within a vagina and nearly disappeared within its folds, he began to doubt that it was the right thing in the right place."

The occasion for using a pessary was usually to act as a support for a displaced uterus caused by being engorged with blood and thus throwing upon the broad ligament a weight which it could not sustained.

The modern treatment of this condition is to use a remedy such as Micajah's Medicated Uterine Wafers, which will deplete the congested uterus and the surrounding mucous membranes of their blood supply, add tone to the tissue and thus relieved the broad ligament of its unusual burden. Dr. Wheeler, of Troy N. Y., says: "For the past five years I have not failed to cure a case of Prolapsus Uteri with Medicated Uterine Wafers and have discarded all pessaries."

Medical Literature.

Of the tons of stuff annually sent to the doctors, how many hundred weight should be read? And having read it what is its value? It would seem that many interesting points might be learned from such a mass of matter. Few men have the nerve and back-bone to throw it all in the waste basket. But it usually finds its way there after taking up some valuable time. I say valuable time, because time would be better spent breathing pure air or taking a nap than reading much of it. Unfortunately Uncle Sam does not make any profit by handling the stuff because he hauls at a loss.—Another subject for legislation. How many times we see names of men thought to be in good standing in the medical profession lauding a remedy to the skies. Of course he is paid for it. Many men in the profession will follow the Ram however that leads the way and sacrifice their dignity sense and patience.

The prevalence of so much trash is demoralizing to science and system, and yet many good preparations are brought out, and many careful scientific and expensive experiments are constantly being conducted. The aim seeming to be to either find a cure or a specific for certain diseases, and all for money of course for the manufacturer. No specific action that would be just to all can be taken. We can best be guided by the thought that we are next to the patient and between him and the medicine. We must be constantly on our guard, absolutely discard and condemn every preparation whose exact formula is not given together with the actual amount of each active drug. Also remember pre-

vention is better than cure. Do not give your patients one-half pound of nails for breakfast and 2 oz. of muriatic acid to dissolve them afterwards. If your patient must have his food digested, do it on the outside.

We will of course continue to receive this mass of literature. Our journals must help us out. They should editorially call the attention of the doctor to every drug or preparation which have stood the test and is of decided merit.

For our own preservation and to prevent blunders we can save time by looking for the formula. If the exact amount of the principal drug is given, or if it is a synthetic derivative and is not clearly and plainly shown so that the least intelligent among us may know its source and qualities, discard it at once.

J. H. FARBER, M. D.

Dayton, Ohio.

Treatment of Rheumatism.

Dr. A. F. Schellschmidt, (New Albany Herald, February 1900) stated that he has had very indifferent results from the administration of the salicylates, as a rule; his cases dragging along, week after week, without appreciable benefit from them. Since last fall he began a systematic exhibition of aspirin in acute rheumatism, and the results obtained have been exceptionally favorable. He gives the drug in doses ranging from 10 to 20 grains, prescribing it in powders, and directing the patient to suspend it in water by the aid of sugar. It is insoluble in water and also in acid media, passing unchanged into the intestines, where it is decomposed. Aspirin was found to have an action similar to salicylate of sodium without the distressing stomach disturbances of the latter. Its action in the author's hands was very rapid, very few cases requiring more than 24 fifteen-grain powders. In one of the cases reported in which the rheumatism was of gonorrheal origin, aspirin gave better results than had previously been obtained from other remedies in similar cases. In only one instance was morphine required to relieve the acute pain. Lemonade was allowed in large quantities. The use of meats was interdicted, and instead of coffee a liberal amount of milk was ordered. The bowels were kept open with castor oil, and hot hop bags were applied to the affected parts.

Little Chicks—And how could we all come from eggs, mama?

Mother Hen—I cannot tell a lie, my dears; I did it with my little hatchet.

THE

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E. C. REGISTER, M. D.

J. C. MONTGOMERY, M. D.

Editors and Publishers.

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- - - - - CHARLOTTE, N. C.

SUBSCRIPTION. \$2-50 PER YEAR,**THE ASSOCIATION OF THE MEDICAL OFFICERS OF THE ARMY AND NAVY OF THE CONFEDERATE STATES.**

At the veteran's Reunion in Atlanta this association was organized with forty members and the membership was further added to, at the Charleston meeting last year. The resolution passed at the Charleston meeting to allow the sons of confederate surgeons and medical officers who are doctors to be admitted to membership on equality with the veterans was a happy thought and will allow the membership to largely increase. The next meeting will be held in Louisville Ky. at the time of the Reunion and a very interesting program will be in evidence. A number of surgical papers will be read on capital operations, recovery from desperate wounds and other interesting bits of professional experience gained during the war.

VACCINATION AND VACCINE.

Vaccination is such a simple procedure that few men think it worth while following any definite rule consequently the method varies with every operator and failures are more or less common.

Success depends upon the method and the vaccine. The very best vaccine may fail to take on account of the faulty manner of applying and the most painstaking care in the vaccination will not compensate for the use of inert virus.

Antiseptic solutions affect the potency of the vaccine so don't use them on the arm. If you must, be sure and wash off with plain sterile water before applying the virus.

Do not attempt to do a venesection as a preliminary operation as the vaccine will take much better if no blood is drawn. When the serum begins to ooze freely from the abraded surface apply the virus and *prick it in* with a knife or ivory point.

Avoid antiseptic dressings if the patient will promise to wear clean clothes.

See that the sleeves are loose and pull them down after the vaccine is thoroughly dry.

As regards the material, use only the aseptic glycerinated lymph and be sure that it has been properly cared for as exposure to high temperature will spoil the very best. The sorest sore arms are not due to the vaccine but to the bacteria mixed up with it and this severe reaction is not only avoidable but is not any more protective than the sterile lymph.

A CORRECT DIAGNOSIS.

It is with a great deal of satisfaction that we notice of late that the phrases "learned physician", "good doctor", et cetera, are rapidly becoming obsolete, and the more definite terms—careful diagnostician, thorough clinician taking their places.

In the good old times a physician's standing with his colleagues was largely determined by his knowledge of the classics, his faith in bleeding, and his Turvey drap department. When called in consultation by a brother physician the first question invariably asked was, "what have you been doing?" The answer served as a wedge to a long and learned dissertation on treatment.

All this is different now. Treatment no longer holds undisputed sway in the sick room. The silk tile and professional black coat once so essential in making treatment effective, have been replaced by more suitable and comfortable apparel, and the doctor called in consultation now goes to work and diagnoses his case regardless of all personal considerations. Indefinite terms no longer satisfies him. Phthisis, pneumonia, mean nothing to him—these are generic lay terms. If pneumonia is present he wants to outline exactly the portion of the lung involved, ascertain if possible the pathological condition of the inflamed area, the condition of the blood, pulse, breathing, etc. Having satisfied himself with absolute correctness on all these points, he gives explicit directions to the nurse, and departs, leaving confidence, hope, and assurance in the heart of his patient. Medicine is rapidly becoming a science, and the physician a scientist working harder and making less display.

OUR GERMAN COLLEAGUES.

The severest indictment of our distinguished German confers is that many of them cultivate a fine contempt for the practical treatment of disease. Absorbed in original bacteriological and pathological investiga-

tion ever digging down to the farthest depths for the cause of disease, they become self-centered and utterly oblivious to the utilitarian application of their discoveries and deductions.

Year after year the list of leucomains and ptomaines is increasing and the classes and species of bacteria keep on multiplying, still, to-day, after a lapse of eighteen years, our knowledge of germs, leucomaines and ptomaines has served us but little in alleviating or curing the ills of the flesh.

The average German mind is insanely philosophical, and intensely unpractical, and in this lies the reason for his fine contempt for treatment.

Let the German scientist pause for a moment, lock the drawers of his laboratory, and put the fruits of his investigations to a practical test. Let him not rely upon the conflicting statements of incompetent oversanguine or luke-warm outsiders as here-tofore, for ignorant testimony can but lead to unscientific and unprofitable experiments. Let the discoverer apply his new synthetic compounds himself and give us his results. Let him do the same with his germs, toxins antitoxins, serums, etc., before rushing headlong into the medical or lay press.

It is thus that our continental colleagues will overcome their contempt for treatment and render the world inestimable good.

The German mind, as said before, is first of all philosophical. It is the mind of a Scientist—the mind of an ideal physician.

It is to our German Colleagues we must look for discoveries and improvements in the treatment of disease, and, considering how little they contribute to classical current literature, we may justly demand the "multiplication of their talents", in science.

SOLICITORS.

In the form of an essay we might say solicitors are of many kinds. We as a profession may say they are all more or less of a nuisance because they all try to get some of our hard earned coin, and that coin is hard earned isn't it brothers? Well there is the man who is solicitous about your library. All book publishing firms seem imbued with one idea, no, two ideas; one to gather up all the matter they can get hold of and put it into as many books as they think the doctor will stand, and the other, that it is worth five or six dollars a volume, or seven dollars if in sheep. Then they hunt for the sheep to put it in, or on, without entering into a discussion of the merits of these voluminous publications it is a pretty safe thing to say that they contain lots of padding, little that's new and

much that is word for word taken from standard text books. However, they add *weight* to your library. Do not understand that they are all without any merit. Be careful.

Then there is the solicitor for various contrivances, machines and instruments supposed to be indispensable. Experience will teach you that a good reliable house will sell you as reasonable—if any instrument house is reasonable,—and will be more satisfactory. Microscopes are particularly well represented, their quality not so well. In purchasing of these solicitors learn their house and its standing, consider the necessity for such goods, decide without asking him to call again before deciding.

There is also the suave, clever, well-fed individual who presents you with a sample, you are always glad to get samples, and these men usually receive the best treatment. They do not try to sell you anything, just make you a present of a dollar or so every time they come. You generally smile, wish them God speed and invite them to call again. It reminds me of the man who could drink or let it alone. He generally drank, and so do you my brothers generally sell or give away these samples without removing the labels or putting the contents in other bottles and without knowing much about the contents either; which we all acknowledge to be bad practice.

These solicitors should all receive courteous treatment because we should be courteous to all people. They are trying to make a living and we ought to know what we want. There are other solicitors who come around who may get attention in the future.

A COLD—WHAT IS IT AND HOW SHALL WE TREAT IT?

A cold is the natural ally of the pathogenic germ. It is more—it is the advance agent of the ubiquitous germ. Guard against catching a cold and you acquire a certain immunity against disease by closing the portals to bacteria invasion.

Physicians should be more careful, more definite and explicit in advising their patients on the subject of dressing. There is as much harm in overdressing as there is in "undressing." Chest protectors do more harm than good unless the shoulders and back are equally well protected. The traditionally flannel belt to guard against kidney and bladder troubles should be discarded. Hair should be worn always short or always long. Delicate evening gowns should not be worn on cold, windy nights when the saloon, hall or reception rooms

cannot be kept at a uniform temperature. A draft that will reduce the temperature of an exposed part of the body 10 deg. F. or more will cause a contraction of the blood vessels of that part. Prolonged contraction of the blood vessels if not uniform over the entire body, and followed by reaction, is the first step of mechanical inflammation. Reflex contraction of the blood vessels of the internal organ governed by the same plexus will immediately follow peripheral contraction.

The blood vessels of the lower extremities are intimately related with the vessels of the stomach and bladder, hence if your patient has an irritable bladder let him keep his feet warm. The same may be said of the blood vessels of the back and shoulder which stand in close relation with the blood vessels of the lungs. If your patient is subject to catarrhal troubles of the mucous membrane of the air passages have him see to the back of his neck and take every precaution against a draft.

Treatment and Therapeutics.—A cold calls for early, sledge-hammer treatment. (a) Remain in doors; (b) hot drinks (non-alcoholic), and a light diet; (c) calomel in fractional doses (1-10 gr.) every hour for six hours, followed by a liberal dose of Epsom salts; (d) morning and evening baths, and massage of the whole body for half an hour for three consecutive mornings.

Take every precaution in dressing to prevent a relapse.

WHY NOT.

Are the doctors as a profession doing all they can to protect their dignity, their standing and their pocketbook? This question can be readily answered in the negative. The profession is over-crowded. The newspapers are filled with advertisements of itinerant doctors. Patent medicines and pamphlets are distributed to our doors and all sorts of questions delicate and indelicate are asked and answered. All the functions of the body are paraded before the public, to the detriment of the morals of the young. All these statements are but the common knowledge of profession and laity. Let us rise in arms is often loudly proclaimed, but how, is not explained. Why no action is taken by the profession is readily seen. The *regular*, feeling content with the teaching of Hippocrates, and believing that the people must be educated, and being everlastingly "hustled" to find his bread and shelter, lies back on his dignity and does nothing. The other schools being more liberal in professional

views as to schools and depending upon their "pathy" or distinguishing name for business, feel that *they* can stand it if the regular can.

Cheap medical colleges, mushroom fads of all kinds, patent medicines, the prescribing druggist, having made the "picking poor" and the doctor now is seldom rich. The well-to-do being almost equally rare, while the very poor we all know. Is the remedy, education of the masses? No. The millenium, when the ordinary citizen will draw the line between the "pathys" from intelligent reasoning is far off, and not to be reckoned with as a factor.

The people will not even object seriously to the patent medicine "ad", and will easily tolerate the prescribing druggist. But these people will help the doctor to down the "Ad." if he takes the lead and will stick to him if he shows why the colleges should be qualified.

Will all of these things be adjusted by time? Quite likely. But the present generation and a few more will all be dead before it does. And even if this generation should be dead before any well directed effort on our part would alter our position, we owe it to ourselves and to posterity to start the ball rolling. How? State legislation discriminates and her standard at the best is low. Therefore, National legislation should be aimed at, a national law regulating medical schools. All schools could unite on the common ground that a high standard of colleges would promote all the interests of all the doctors. While this idea is being worked upon, let every doctor who respects himself, no matter of what school, take off his coat and work for every state law which aims at improvements in standing of the profession. Don't be slow in asserting your individuality.

THE DRUGGIST AS FIRST AID IN ACCIDENTS.

The professionally doctor and druggist should be friends and aid each other for their own benefit and that of their patients. It is natural that physicians and even the lay must object to substitution—"just as good"—and counter-prescribing. However, there are circumstances where the druggist, for humanity's sake, must act as first aid in accidents, and he should be protected by the physician. It is a habit here that any person who meets with an accident goes or is carried into a drug store. The druggist can not refuse and must stop hemorrhage, bandage, and give restoratives. He never has any profit from such help, the crowd rushes in, his legitimate business is inter-

rupted, and in most cases he receives neither thanks nor pay. He can not refuse such services or the public would object and the reporters cry him down in their journals. Neither can it be expected that he treats such cases as an experienced physician or surgeon would treat them, therefore the physician should in such cases appreciate the first aid to the injured, and protect the druggist as his friend.

Now the patient should be thankful for such good service rendered him, and as soon as possible place himself under medical treatment, as he well knows that an apothecary is not a doctor. As a rule, however, patients are neither thankful nor generous, neglect themselves, employ no physician, and in consequence suffer. Then they blame the druggist for everything and often sue the firm for heavy damages. Just such a case came to trial before Judge McLean, in the Supreme Court in New York City. The circumstances were as follows:

A butcher cut *his hand severely*, went to the drug store, where the clerk bandaged it, stopped the hemorrhage, and gave him a mixture with which to keep the bandage moist. The patient never employed a physician. In due time sepsis set in and his thumb had to be amputated. Patient sued the owner of the store for \$10,000 damages. The Judge decided in favor of the defendants. His decision was that the owner of an apothecary is not legally obliged to employ a surgeon as a clerk, the latter has acted for humanity's sake on his own responsibility, and neither owner nor clerk can be held responsible for any after effect.

This decision will meet the approbation of the medical profession, who in all such cases should appreciate the good will of the druggist, and come to the conclusion that the patient must have been very unreasonable and mean, as he never came back for additional advice, nor employed surgical advice afterwards.

The law can not well call it "medical practice" if anybody gives aid in accidents or emergencies, to a helpless individual only to enable him to go for a doctor afterwards. But if such a person neglects to be treated by a skillful physician, he must take the consequences and can not blame the good Samaritan or any body else.

RECIPROCITY AMONG THE STATE BOARDS

The Committee on Inter-State Reciprocity for the License to Practice Medicine of the Wayne county (Mich.) Medical Society has made a third report in which North Carolina, as is her custom, comes to the front for the welfare of the profession.

Among the very first States to require a license to practice medicine within her borders she has exercised her power with wisdom and prudence. The people and the profession are the gainers by the good work.

And now the temptation to put all this aside comes in a very seductive way from her Michigan friends, the case is very adroitly put and the fact that many have already fallen is placed boldly to the front, but without success.

The following letter from our efficient chairman of the Committee on Legislation is well said and to the point:

RALEIGH, N. C., Dec. 30, 1899.

"In reply to your letter I enclose a copy of our medical license law as amended by the legislature of 1899. You will note that a license from another State only entitles to examination, just as diploma from a college in good standing does. We considered the reciprocity idea, but our standard is so much higher than it is in most of the States that, for the present at any rate, we are afraid of it. We can see no objection to requiring a physician who wishes to practice in our State, coming from another State to submit to the same conditions that we demand from our own people. I do not wish to throw cold water upon your work, but I do not think you can count on North Carolina for a good many years to come."

Down in Alabama they have a system by which applicants are examined in their respective counties, that is each county has a board of examiners. According to the Alabama Journals the arrangement is very unsatisfactory, because some of the counties are not strict enough and all the applicants go down there to be examined, the other counties suffer because of the weakness in another part of the State.

There is a trite old saying that a chain is just as strong as its weakest link, and this applies with force to the proposed interchange of license to practice medicine.

Just so soon as this arrangement is perfected the States which are now so well protected would be at the mercy of the loose and abominable medical laws that rule in some of our Western States by which bone-setters, back-rubbers, cancer curers, and such like can disgrace the practice of the healing art.

Reciprocity in some things may do, but in State license to practice medicine it is a backward step in the dark.

Each State is capable of looking after its own internal affairs, if not, then let the President at Washington appoint a commission, but under no circumstances can we

afford to shoulder the weaknesses of a far away State.

The condition as it now stands is perfectly satisfactory to all well thinking people, except those who simply want a change. By the laws of North Carolina, for instance, no qualified man is debarred from the practice of medicine, it is only those who are not qualified and are not the qualified willing to put up with a little inconvenience if they know that by it they are saved from disreputable association in all the years to come? And then the public that the politician talks so much, and cares so little, about, they are very much concerned in the protection afforded them by an efficient Board of Examiners.

And now as we have made some progress for a purer, better medicine, let us not go back but rather on and up.

MORE GRATUITOUS WORK FOR THE OVERWORKED DOCTOR.

The Society of Medical Jurisprudence presented a communication to the New York City Board of Health under the pretense to guard against premature burial. They assert that the distinction between real and apparent death requires more precise scientific tests. They say any person who happens to be present when a person stops breathing can report him to be dead, and in most cases the physician who has seen him alive will certify to his death without even having seen his body; therefore they suggest a change in the blank forms of death certificates so that they be made to contain the declaration that the physician personally has examined the body, they want the signs of death to be enumerated in the blank, and that the physician shall indicate the presence or absence of each with Yes or No. Questions to be answered are: Has the respiration stopped permanently? Has the pulsation of the heart stopped permanently? Do the dependent portions of the body show a purple discoloration? Does rigor mortis present? Are the corneas dull? Are the pupils dilated? Are there unmistakable signs of putrefaction?

They continue: "Furthermore, we suggest that by ordinance your honorable board make it illegal to do anything to the body of the supposed dead which, if he were alive, would cause him pain or injure him, before the certificate of his death has been signed by the physician."

The suggestions of the Society of Medical Jurisprudence means to impose on the physician more work for which he is not paid, which is unnecessary and exact state-

ments from him, which, under most circumstances, are impossible to give. Death certificates are never paid for, no reputable physician can refuse to write them and they have always been given on good belief that the patient is dead. In the present certificate the physician states the time of attendance, when having seen the patient alive last, and the causes of death, etc. As a rule, such information ought to be sufficient. The intended changes involves much and there are some questions which often cannot be answered. How can anybody answer the *permanent* stoppage of respiration, pulsation, etc? A purple discoloration may have existed during life, and does not prove anything. Putrefaction cannot be expected on the first day. For some cases a post-mortem is necessary to state the cause of death, but the Medical Jurisprudence insists on the certificate first and cause of death which only an autopsy can reveal. This fuss is entirely unnecessary.

We read of premature burials in journals and novels, but the reality is almost impossible. There may be cases of suspended animation, but the premature burial can be prevented by other means. Doubtful cases need extra examinations and time. The best preventative is to place the corpse in a large hall under constant care and observation for three days. The slightest motion of a muscle causes a bell to ring. In Europe such preliminary depots for the death are in existence, and the contraction of muscles causes often the ring of bells, but the patient is and remains dead.

The projected ordinance of medical jurisprudence is useless, impracticable and unjust to the physician. In doubtful cases the physician would not sign a certificate and refer the case to the authorities, which in most places is the coronor.

What next to trouble the physician?

OSTEOPATHY IN PHILADELPHIA.

Osteopathy has no code of ethics and the basic principle is to pull the patient's leg for all it is worth. An illustrated reading notice in a recent issue of one of the leading Philadelphia daily newspapers demonstrates the fact that they are in the ring with the patent medicine vendors and quacks of all kinds, and that they have money to burn in the way of advertisement.

A half page article on the "only college of Osteopathy in Philadelphia," appears in the Philadelphia Times for February 18th, illustrated with cuts of the faculty and the treasurer evidently had to part with several tuition fees in consequence.

It is wonderful how much water a little

ink will give color to, and it is still more wonderful how little of the truth can be mixed with a vast lot of absurd deception and make it seem plausible to the superficial examiner.

A grain of truth is ground up with bushels of nonsensical suppositions and the flour is made up into so-called bread to feed the osteopathic student. The mill is evidently skillfully constructed, and enough of chemistry, anatomy, surgery and obstetrics is mixed in to kinder make the thing hold water.

One of the founders of this school was so quick to learn the principles of the new science that he was made a professor in the original school at Kirksville before he graduated. But old Dr. Still was too slow for him and he emigrated East and started out on his own hook. He is well educated and is the phraseologist of the science as he has the ability to say the least in the most words, and his ability is well shown in the advertisement in question. The following extract shows the talent:

"Neurology is really our strongest point. We master all known laws of nerve action. All motion, sensation, secretion and nutrition are under the governance of nerves. We secure our results largely by treating the nerves. Indeed, the conspicuous weakness of ordinary practice is its neglect of the body. We let drugs alone, and study everlastingly the body. We seek to master all its known elements, physical, physiological, psychological and pneumatic. Man, whether sick or well, is a unit, and nothing short of the mastery of all his elements may keep him in health. We study chemistry, too; not that we may dump the combinations of the pharmaceutical laboratory into the body, but that we may know what goes on in the living laboratory of the body."

So we see the fraud is forced to add a little more truth to catch the Eastern people.

Old man Still was satisfied to lay it all on the bones, and that passed all right in the West, but the leaders in the East find it necessary to bring in the nerves to help share the burden. Very few people will believe you if they are told that their bones are slightly dislocated, but tell the best of them that their nerves are out of order and they begin to listen. So with bones and nerves the osteopaths are coming along, later they may add the stomach and liver to the list of possibly diseased organs and then they will be invincible. Think of what a combination Dr. Miles' Nervine, Simmon's Liver Regulator and Still's bone setting and massage would make as a science taught in a handsome college build-

ing! Osteopathy has great things before it if it will only widen out a little.

Nearly every first-class fake has some religion in it, and so osteopathy is well up to the front in this respect, as one of the founders of the Philadelphia school is a graduate of Princeton Theological Seminary, and for some time a preacher of the gospel. But finding that there was little money in trying to save souls, he decided to try aches and pains at so much a rubbing and has made a great deal more money deceiving people than he could make by showing them the way to truth and light, and when we come to think of it, a feeling of sadness comes over us. Not because people are fools, ready to follow anywhere, but because men who know the right will deliberately choose the wrong for the sake of gain.

THE SURGEON-GENERAL'S ARTICLE ON THE PLAGUE.

A very complete report on the Plague has been made by Surgeon-General Wyman, of the Marine Hospital Service.

The plague is an infectious disease caused by a specific bacillus discovered by the Japanese physician, Kitasato.

Three forms are recognized, the bubonic or ganglionic, the septicemic, and the pneumonic. The bubonic form is the most common, the pneumonic the most fatal.

Bubonic plague begins by fever, nausea, pains in the head and limbs, swelling of the glands or the groin, the axilla or the neck and this swelling is very painful. Delirium and enfeeblement of the heart's action are soon followed by death.

In milder cases the swelling is limited and an abscess forms and the patient may recover.

In still milder cases the glands enlarge and go on to suppuration without any general constitutional symptoms and in such form is often unrecognized and so persons affected may easily propagate the disease.

Sometimes no localized glandular swellings are noted or there may be a slight enlargement of a number of glands, but the constitutional symptoms are intense, that is the disease is septicemic from the beginning and the patient dies in a few hours.

The pneumonic form begins by a chill with vertigo, nausea and pain in the head and limbs with elevated temperature. After three or four days the pulmonary symptoms develop as pain in the chest, dullness, rales and cough. The sputa are abundant and may contain blood. As the disease progresses all the symptoms become accen-

tuated with involvement of the heart and death on the fourth to eighth day.

Examination of the sputum shows the plague bacillus always associated with staphylococci, streptococci and diplococci.

The plague bacillus is decolorized by Gram's method while the other organs remain stained. The germ of the plague is contained in the pus of buboes, abscesses, and wounds, in the sputum and blood, rarely in the stools and urine.

It gains entrance by wounds, excoriations or crevices and small lesions which often pass unrecognized, and by respiration.

It may be transported by parasites, fleas, etc., and especially by rats and mice.

The following rules are given for the management of a case:

A patient stricken with plague should be isolated.

The patient should be kept in a state of the utmost cleanliness.

The persons alone who are charged with his care should have access to him.

They should observe the following precautions:

To take neither food nor drink in the sick room.

To never take food without washing the hands with soap and a disinfecting solution.

To frequently wash the face with a disinfecting solution.

To thoroughly air the sick room several times a day.

To rinse the mouth from time to time, and always before eating, with a disinfecting solution.

In the sick room the following precautions should be observed:

Curtains, carpets, rugs, and all furniture which is not necessary should be removed.

The bed is to be placed in the middle of the floor. It should be washed with a disinfecting solution. There should be no dust, dirt, nor parasites in the corners of the room. Cloths, coverings, and mattresses are to be disinfected by steam or boiling at the conclusion of the case, or as often as they accumulate.

The floor of the room or apartment should be washed or mopped daily with a disinfecting solution.

The difference of mortality in the different races is very striking, being 93.4 per cent. in the Chinese, 77 in the Indian, while among the European it is only 18.2. Some credence is given to Dabney's theory that the high mortality rate among the Indians is due to the fact that they live exclusively on rice and pulse, that is food very

deficient in protein and this coupled with their mode of living makes them very susceptible to the disease.

As to treatment he highly recommends Yersin's serum after the outset of the disease and the Hoffkine's serum as a prophylactic before infection.

Yersin's serum is prepared in very much the same way as the antitoxin for diphtheria is made while Hoffkine's agent is simply a culture of the bacilli.

In the one case the antitoxin is generated in the horse, the other in the blood of the patient, hence Hoffkine's preparation should never be used after infection has taken place.

The *bacillus pestis* is very easily killed by disinfectants and germicides. A 1 per cent. solution of carbolic acid or a 1 to 1000 bichloride will readily destroy it.

Mineral acids are also very effective, a 1 to 1000 sulphuric acid solution kills them in five minutes. Hydrochloric acid 1 to 1000 in 30 minutes.

Infected material remains active about 8 days, but in direct sunlight the bacilli die in three to four hours.

In connection with the serum prophylaxis and serum therapy the sanitary condition of the patient's environment is very important. For room disinfection, formaldehyde and sulphur are recommended.

In this country we are more or less safe from the disease even if introduced, but the efficiency of our health officers will doubtless prevent its introduction.

Though still very fatal in China and India, the plague has lost much of its virulence since the 16th century and should it ever gain a foothold in this country the mortality rate would likely be comparatively low.

BOOK REVIEWS.

The American Year-Book of Medicine and Surgery, being a Yearly Digest of Scientific Progress and Authoritative Opinion in All Branches of Medicine and Surgery. Drawn from Journals, Monographs, and Text-Books of the Leading American and Foreign Authors and Investigators, Collected and Arranged with Critical Editorial Comments by Twenty-eight of the Leading Specialties and Writers of the Country, Under the General Editorial Charge of George M. Gould, M.D. Illustrated. The Two Volumes, Price Cloth, \$3.00 per Volume; Half Morocco \$3.75. Philadelphia. W. B. Saunders, 925 Walnut St., 1900.

Heretofore this magnificent work has been issued in one volume, but to make the

work less tiresome to hold in reading, as well as for the convenience of specialists, the publisher has issued this edition in two volumes, a plan that will at once recommend itself to all subscribers.

This work represents in a condensed form the latest and best work of our profession. It hardly seems necessary to say more to those who have had copies of former years. The editor of the work is a man who appreciates the wants of the profession, and the men who assist him as department editors are able men and well and thoroughly qualified for the work. General Surgery is the first topic under discussion in the volume devoted to surgery. This section of two hundred and twenty pages is ably treated by W. W. Keen, M.D., and J. Chalmers DaCosta, M.D. Beginning with Asepsis and Antisepsis you are lead along through Erysipelas, Tetanus, &c., Cysts and Tumors, Anesthetics, Diseases of the Esophagus and Stomach, Diseases of the Peritoneum and Intestines, Appendicitis, Hernia, Diseases of the Liver, Diseases of the Respiratory Organs, Diseases of the Lymphatic System and Thyroid, Bone Diseases and Fractures, Dislocations and Diseases of the Joints, Venereal Diseases and Syphilis, Diseases of the Brain and Nerves, Diseases of the Kidneys and Ureters, Diseases of the Penis, Urethra, and Testicle, Diseases of the Bladder and Prostate, Burns, Ulcers, and Plastic Surgery, &c., giving under each disease the latest and most modern scientific progress and research. Dr. Martin Cook Hirst and Dr. W. A. Newman Dorland next treats the subject of Obstetrics covering 75 pages. One of the nicest features of this section is the Microscopy of Obstetrics, especially in fetal pathology and the pathology of the fetal appendages.

Drs. Baldy and Dorland give us 86 pages on Gynecology. This chapter is beautifully illustrated. Orthopaedic surgery is also ably treated at the hands of Virgil P. Gibney, M.D., and J. Hilton Waternem, M.D. Next comes the Chapters on Ophthalmology by Howard Forde Hansell, M.D., and Wendell Reber, M.D., of Philadelphia. Otology is next discussed by Dr. C. H. Burnett, Nose and Larynx, Drs. Fletcher Ingals and Henry G. Ohls, and the last chapter in this volume is from the pen of that well known writer Dr. C. A. Hamann, of Cleveland, Ohio.

We find in the volume on Medicine that the same care and honest effort to give the progress and research upon the subjects herein found as in the volume on Surgery. Nearly half of this volume is taken up with General Medicine and is under the

careful supervision of Dr. Alfred Stengel, of Philadelphia.

General considerations regarding Infectious Diseases is the first with which he treats. Under this he includes the different fevers in their various manifestations, the bubonic plague, tuberculosis, pneumonia, diseases of the stomach, &c. Following this superb section is the one on Pediatrics by Lewis Starr, M.D., and Alfred Hored, Jr., M.D. Next comes Pathology, by David Riesman, M.D., of Philadelphia. Nervous and Mental Diseases are next discussed by Archibald Church, M.D., of Chicago. Cutaneous Diseases and Syphilis by Lewis A. Duhring, M.D., and Milton B. Hartzell, M.D., furnish one of the most important and useful sections in the entire work. No less interesting and certainly as important is the section on Materia Medica, Experimental Therapeutics and Pharmacology, by Rynold W. Wilcox, M.D., and A. A. Stevens, M.D.; Physiology, by G. N. Stewart, of Cleveland, Ohio; Legal Medicine by Wyatt Johnston, M.D., of Montreal Canada; Public Hygiene and Preventive Medicine, by Samuel W. Abbott, M.D., Boston Mass., and Physiologic Chemistry, by Walled Jones, M.D., and Reid Hunt, M.D., Baltimore, Md., are the four closing chapters of this volume.

It is impossible to give too much praise to these excellent volumes. They hold within their covers a record of practically all the progress that has been made during the year they claim to cover. They are not only books for the student, the teacher and the writer, but for the "busy physician," for here he will find the latest ideas on the treatment of every disorder, as well as the latest views on the pathology of the most common as well as the most obscure of diseases. The two volumes contain near 1300 pages and a full and well arranged index places all this vast amount of information in easy reach of the student. The volume are well illustrated and are a credit to the enterprising publisher.

The Principles of Treatment and their Applications in Practical Medicine. By J. Mitchell Bruce, M. A., M. D., F. R. C. P., Physician and Lecturer on the Principles and Practice of Medicine, Charing Cross Hospital, Consulting Physician to the Hospital for Consumptives, Brompton; Examiner in Medicine, University of Cambridge. Adapted to the United States Pharmacopoeia by E. Quin Thornton, M. D., Demonstrator of Therapeutics, Pharmacy, and Materia Medica, Jefferson Medical College, Philadelphia. Lea Brothers & Co., Philadelphia and New York. 1900.

This work is divided into two great divi-

sions: Part I. Principles of Treatment. Part II. Illustrations of the Principles of Treatment.

In the opening chapter the author uses these words: "Therapeutics involves two principle considerations: the ends to be attained by treatment, and the means of attaining these ends. The first of the subjects is too often subordinated to the second. A knowledge of ways and means is as necessary as a knowledge of what requires to be done, but must not usurp its place. The first question in general therapeutics, as well as in practice, is: What are the objects of treatment? The answer to this question can be found only in one way; by an appeal to knowledge based on correct observation." The above gives a general plan and outline followed in the present treatise.

Chapter II. is devoted to Principles of Treatment founded on ætiology. The first group of recognized causes of disease which the author examines in search for therapeutical indications founded on ætiology are the pathogenetic micro-organisms. Animal Parasites, Poisons, Unsuitable Food, Traumata, Mechanical Stress, Cold and Heat. The next chapter is devoted to the Principles of Treatment Founded on Pathology. Under this section the author gives in fine form a therapeutical study of Inflammation, Ulceration and Necrosis. Indications for treatment drawn from pathology, possess many advantages. They bring the practitioner face to face with the diseased organ or tissue. They direct him to destroy it, to sweep it away, to sacrifice the affected part for the sake of the whole, to close a broken vessel, to set a fractured bone, to evacuate pus, to correct a deformity, to promote the growth of a muscle. They are not dependent on a knowledge of causes, which are often obscure like that of syphilis, or intangible like trauma, but on the knowledge of the human body, the anatomy of which, both normal and morbid, is familiar. Space will not allow a detailed review of each chapter. In reading the chapters in Part II. we were forcibly struck with the perfect manner in which the author describes the treatment of the valvular diseases of the heart, acute inflammation of the heart, acute and chronic Bright's disease, acute bronchitis, pneumonia, typhoid fever and others. Each disease is treated from ætological indications, remedial treatment, pathological indications, clinical indications and indications from the causes. At the close of each chapter he gives an outline of Practice which gives the general management of the case from its beginning to its termination. Under this outline of

practice is given many excellent prescriptions. This is unquestionably a very fine feature of the book. We know of no work that has been published that will be of more universal value and aid to all classes of physicians than the one before us. It is unquestionably one of the best works that has ever been given to the medical profession, and we feel it our duty to beg all progressive medical men to peruse its pages. It is convenient in size, substantially bound and beautifully printed.

Lea's Series of Pocket Text-Books. Edited by Bern B. Gallaudet, M.D. Crockett's Gynecology. A Pocket Text-Book of Diseases of Women, by Montgomery A. Crockett, A.B., M.D., Adjunct Professor of Obstetrics and Clinical Gynecology, Medical Department of the University of Buffalo, N. Y. In one Handsome 12mo. Volume of 368 pages, with 107 Illustrations. Cloth, \$1.50 net. Flexible red leather, \$2.00 net. Lea Brothers & Co., Philadelphia and New York. February, 1900.

This one of Lea's Series of Pocket Text Books is fully up to the standard set by the numbers of this series which have already appeared and this standard is high, vastly higher than the average professional work at such a popular price.

The author is well qualified to do his part in bringing out a perfectly reliable and up-to-date work on Gynecology and the liberality of the publisher has done the rest. For the student this work is invaluable and for the practitioner it is indispensable if he is doing any gynecological work at all.

The chapter on Sterility is to the point and presents the subject in a logical and concise manner. The first three chapters on Diagnosis, Local Treatment and Gynecological Operations should be read over once a month by every busy doctor.

The seventh chapter on Tumors is the most important of all and is alone worth the price of the book.

Recollections of a Rebel Surgeon (and other sketches) or the Doctor's Sappy Days. By F. E. Daniel, M.D. Illustrated, 1899. Von Boeckmann, Schutze & Co. Austin, Texas.

The author of this book, Dr. Daniel, is also editor of The Texas Medical Journal, which Journal comes to our desk regularly and with whose writings we are familiar. Not only does the doctor edit a good Journal, but he also writes a good book. The reminiscences of "This Jolly Old Doctor" have been told in a pleasing and very interesting style. While they read novel like, yet the writer states them all to be facts. While most of them are humorous, some sad, some pathetic, they are all actual

occurrences. As stated in the introductory, they do not relate to the professional duties of the army surgeon (as might be supposed from the title of the book), but very little; but are the most part recollections of fun, frolic, fishing or flirting, as the case may be, "Enduring of the War," in the doctor's "sappy days."

The book contains 264 pages and is bound in a neat red back binding.

Dudley's Gynecology. A Treatise on the Principles and Practice of Gynecology. By E. C. Dudley, A. M., M. D., Professor of Gynecology in the Northwestern University Medical School, Chicago. New (2d) edition. In one very handsome octavo volume of 717 pages with 453 engravings of which 47 are in colors and 8 colored plates. Just ready. Cloth, \$5.00, net. Leather, \$6.00. Philadelphia: Lea Brothers & Co.

The first edition of this work having been exhausted in a year proves the success of Dudley's Gynecology, both in plan and execution. The author has covered the entire subject from a practical standpoint, avoiding all speculative and theoretical views. This edition is the result of a searching revision, visible not alone on every page, but also in the addition of seventy-eight pages, thirty-one new engravings, and six new full page plates. The book on pathological lines is divided into six parts, as follows: I. General Principles; II. Inflammations; III. Tumors, Malformations, and Tubal Pregnancy; IV. Traumatism; V. Displacements and Pelvic Massage. Part VI. Disorders of Menstruation and Sterility. By this classification, rather pathological than regional, the reader, especially in the part on inflammations, will gain a better grasp of the sequence and significance of each pathological process.

In this edition the functional disorders of Menstruation and Sterility have been brought together into four new chapters: Chapter LI. Premature Menstruation, Protracted Menstruation, Amenorrhœa, and Scanty Menstruation; Chapter LII. On Menorrhagia and Mentrorrhagia; Chapter LIII. On Dysmenorrhœa, and Chapter LIV. On Sterility. These chapters constitute an entirely new part of the book. Part VI. There will be found much new matter in the chapters on Cystitis and Diagnosis. Every chapter and nearly every page will show evidence of revision, either verbal or essential. This work brings together the fully matured and essential facts in the science and art of gynecology, so arranged to meet the requirements of the student of medicine, and be a safe guide to the practitioner for reference. Every subject is clearly

described, with the author's method of treatment. The numerous illustrations are very clear and comprehensive. The edition is very handsome, and we commend it highly.

The Principles and Practices of Modern Surgery. For the use of Students and Practitioners of Medicine and Surgery. By John B. Roberts, M. D., Professor of Anatomy and Surgery in the Philadelphia Polyclinic; Mutter Lecturer on Surgical Pathology of the College of Physicians of Philadelphia. New (2d) and Revised Edition. In one very Handsome Volume of 838 pages, with 474 Engravings and 8 Plates in Colors and Monochrome. Cloth \$4.25, net; leather, \$5.25, net. Lea Brothers & Co., Philadelphia, Pa.

In this work the author gives to the profession in a condensed form the accepted and approved procedures of Modern Surgery. The rapid advances made in every department of surgery has rendered this the revised second edition necessary. It will prove a useful guide to the student in the beginning of his surgical work, and also assist the general practitioner in the solution of the surgical problems which may from time to time be presented to him. In accordance with these objects the book is eminently a practical one. It meets the requirements of both the student and practitioner, affording elementary instruction to the one, and serving as a book or reference in doubtful and complicated cases to the other. The work is divided into two grand divisions: General Surgical Pathology or Principles of Surgery and Special Surgical Pathology or Practice of Surgery. The opening chapter in the work is devoted to the all-important subject of inflammation, giving its causes, pathology symptoms, varieties and treatment. A great deal of space has been allotted to modern pathology and asepsis, without a knowledge of which no surgeon can do satisfactory work. The author has paid special attention to the subject of fractures and dislocations, having discussed them in a practical and comprehensive manner, because of their daily importance to the practitioner of medicine and surgery. In this the second edition the author has entirely rewritten the articles on Appendicitis, Diseases and Injuries of Joints, Diseases and Injuries of the Genito Urinary Organs, Dislocations, Excisions and Amputations, making them up to date in every sense. The volume has been indexed very thoroughly and can be used most satisfactory as a book of reference. The style of the author is clear and scholarly and the publishers' part of the volume is all that could be desired.

Memoirs of a Revolutionist. By P. Kropotkin. Boston and New York: Houghton, Mifflin & Company. 1899.

In the introductory it is stated that there are at this moment only two great Russians who think for the Russian people, and whose thoughts belong to mankind—Leo Tolstoy and Peter Kropotkin. Tolstoy has often told us in poetical shape, parts of his life. Kropotkin gives us here for the first time, without any poetical recasting, a rapid survey of his whole career. One will find in this volume a combination of all the elements out of which an intensely eventful life is composed; idyl and tragedy, drama and romance. The childhood in Moscow and in the country, the portraits of his mother, sisters, and teachers, or of the old and trusty servants, and the many pictures of patriarchal life are done in such a masterly way that every heart will be touched by them. In certain parts of the work we find the sensational element that belongs to the novel. The book is prettily bound and nicely printed.

Village Life in China. A Study in Sociology. By Arthur H. Smith, D. D., Author of "Chinese Characteristics," with illustrations. New York, Chicago, Toronto: Fleming H. Revell Company, Publishers of Evangelical Literature.

The writer of this book is thoroughly familiar with the Chinese people, and by an extended experience in China, has come to feel a profound respect for the numerous admirable qualities of the Chinese, and to entertain for many of them a high personal esteem. He states that an unexampled past lies behind this great race, and before it there may lie a wonderful future. China was never so much in the world's thought as to-day, nor is there any apparent likelihood that the position of this Empire will be less conspicuous at the opening of the twentieth century. The customs of this people, their mode of living, their habits, their religious observations, their family life are all graphically and well described by the writer. The illustrations are many and handsomely displayed. The volume furnishes interesting reading.

Through Unexplored Asia. By William Jameson Reid. Illustrated by L. G. Bridgman. Boston: Dana, Estes & Company, Publishers.

The present volume is an account of a journey of exploration through the hitherto unknown regions of Western China and Eastern Thibet, during the year 1894, in conjunction with the late George Burton. The facts relating to the scenes which transpired in this huge undertaking are told in

a most thrilling manner. The history of the defiant natives, their mode of living, the hardships of this adventurous journey is told in a novel like way, affording interesting and exciting reading. It is a very pretty volume of nearly five hundred pages, nicely illustrated and printed in large clear type.

Out of the Past. By Eleanor Hooper Coryell. New York: Street & Smith, Publishers, 238 William Street.

This book contains 168 pages, and is clearly printed and neatly bound. The story is told in an interesting and pleasing way.

Leaders in Typhoid Fever. By E. B. Nash, M. D., Author of "Leaders in Homeopathic Therapeutics." Philadelphia: Boerick & Tafel. 1900.

This little work gives the leading homeopathic remedies indicated in typhoid fever, with their differentiations. It forms a very neat little book.

Transactions of the Louisiana State Medical Society, at its Twentieth Annual Session, held at New Orleans, La., May 16, 17, 18, 1899. New Orleans: Searcy & Pfaff. 1899.

These transactions are always welcome to our table. They give the minutes of this well organized Society very carefully and in a condensed form. Many papers of note and merit were read at this meeting and the discussions are very good. Dr. Hermann B. Gessner is Secretary, and Dr. W. G. Owen is President. They are printed neatly and have a good binding.

LITERARY NOTES.

The American Monthly Review of Reviews for March discusses the war in South Africa in its various phases, the Hay-Pauncefote treaty, the Puerto Rican tariff, our situation in the Philippines, the steamship subsidy bill, the Kentucky disorders, Governor Roosevelt's administration in New York, the approaching Presidential campaign, and many other timely topics.

The Living Age announces a four-part story, called "Misunderstandings," translated from the French of Madame Blanc, to begin in the number for March 3. The "misunderstandings" referred to arise from the free and unconventional conduct of an American girl in Paris, and the story is, in effect, a new "Daisy Miller" from the Parisian point of view.

The Forum for March contains its usual array of timely and interesting articles. No dull contribution graces its pages. Among the twelve papers to be found in this number are "Government Deposits in Banks" by George E. Roberts, director of the United States Mint. Mr. Henry O. Dwight discusses "Our Mohammedan Wards;" George F. Becker, United States Geologist, portrays "Rights and Wrongs in South Africa;" F. Cunliffe-Owen writes entertainingly of "Englishmen in the United States;" William Ordway Partridge, the celebrated sculptor-author, contributes an article on "The True Relation of Sculpture to Architecture;" Ho Yow, Chinese Consul-General to the United States, gives his views concerning "Western Benefits Through China's Development;" and Prof. W. P. Trent furnishes a review of "Mr. Stephen Phillip's Play."

Wm. Geddes, M. D., 1720 14th St., Washington, D. C., says: Aletris Cordial has proven, in a case of dysmenorrhea of some years standing, wonderfully efficacious and has, apparently, given to the sufferer complete relief. This being the first case in which I have had occasion to try the Aletris Cordial, and sufficient time having elapsed for me to speak of the permanence of the cure, I can say that I propose to continue the use of Aletris Cordial in all such cases, and wherever a uterine tonic is indicated.

ABSTRACTS of the One Hundred Leading Articles of the Month.

Gastrointestinal Infection in Infants.

Not every disease of the child's alimentary tract is an expression of some infection but many of the diseases of infancy start as indigestions says I. A. Abt in *Medicine* for February.

Booker's classification of acute diarrheas is quoted. The first class is simply dyspepsia and is non-inflammatory; the second is characterized by moderate elevation of temperature and a considerable degree of toxemia and bacilli are present in great numbers as the colon bacillus, bacillus lactis aerogenes and others.

In the third class the diarrhea is distinctly inflammatory and there is general infection. Streptococci are found predominating.

However the opinion is general among bacteriologists and clinicians that the acute gastrointestinal disorders of children cannot

be attributed to a specific form of bacteria.

The toxic symptoms of gastrointestinal infection depend upon the introduction into the alimentary canal of poisonous substances which are contained in the blood. For example, Vaughan isolated a toxic substance, tyrotoxin, from milk, which was poisonous for man and animals.

Bacteria may be introduced from without; or the ordinary saprophytic bacteria which inhabit the intestinal canal may take on a special virulence.

The most severe disturbances are caused by the metabolism of bacteria; these microorganisms by their activity either produce acids or cause decomposition of albuminoid substances; the products act as powerful irritants to the intestines, and by injuring the intestinal wall gain access to the blood and lymphatics, in this way producing the local and constitutional symptoms.

There can be no doubt that specific intestinal infection may occur in infants; the case of sepsis of gastrointestinal origin reported above illustrates this point. Typhoid fever, though not frequent in very young children, may also occur.

The Treatment of Gunshot Wounds of the Abdomen.

In reply to a circular letter sent to 100 surgeons, 253 operated cases are reported by H. Horace Grant in the *Georgia Journal of Medicine and Surgery* for January. The mortality rate was 52 per cent. In 21 cases neither perforation nor serious hemorrhage was found, however they all recovered, so the operation did no harm.

In 28 of the 133 fatal cases there was found post-mortem the evidence of faulty surgery in the presence of unsecured perforations or hemorrhage.

Five per cent. of cases, with severe peritonitis, may be expected to recover after laparotomy.

The essayist maintains that the indications for an immediate laparotomy, as an exploration, by an experienced hand, where a ball is traced into the abdominal cavity are as imperative as the call for operation in strangulated hernia, and that when such conclusions become surgical principles many lives will be saved. He declares that there are no conclusive symptoms of penetration and fatal injury in many cases until too late for hopeful surgery, and that when the perforation is from such direction as to make it difficult to trace it (from behind or from the pelvic or thoracic cavities) the general symptoms should be the guide, but the side of operation should have the benefit of the doubt.

Lesions of the Liver in Young Children.

R. G. Freeman in the Archives of Pediatrics for February presents a study of lesions of the liver in infants and young children.

The following lesions came under his observation: Descended liver, congested, fatty, waxy and cirrhotic liver, focal necrosis, syphilitic disease, and tuberculosis of liver and suppurative hepatitis.

Four cases of descended liver had recently been examined at autopsy. Three being cases of tuberculosis and one a lobar pneumonia. In all the cases the liver had slipped down the right side of the abdomen, the right side of the liver being in the pelvis.

Fatty liver was found in 41 per cent. of the autopsies and in all cases under five years of age it was due to fatty infiltration. The usual text-book statement that fatty liver is most commonly found in certain wasting disease is negated by his experience. Oddo's classification he considers the more nearly correct of any.

69 per cent. of the cases of acute meningitis (non tuberculous) were associated with fatty liver, 53 per cent of measles and 50 per cent. each of diphtheria and chronic bronchopneumonia, were also associated fatty liver.

Waxy liver is very rare being found in only two cases.

Only two cases of marked cirrhosis are reported.

Focal necrosis was found in four cases following measles.

The author concludes with the following summary.

Descent of the liver down the right side of the abdomen, so that the right lobe reaches below the crest of the ilium, occurs not very rarely in infants, and particularly in those whom the liver is enlarged.

Fatty liver occur very frequently in the infants and children which die at the Foundling Hospital, or in about 41 per cent. of all cases.

The condition of nutrition of the child, as expressed by the absence of fat in general and wasting of tissue, apparently has no connection with the fatty condition of the liver, the condition of nutrition in the cases having fatty livers averaging about the same as in the whole number of cases.

Fatty livers occur rarely in the following chronic wasting diseases: Marasmus, malnutrition, rachitis and syphilis, unless such condition be complicated by an acute disease.

With tuberculosis fatty liver occur not more often than with other conditions.

Fatty livers occur most often with the

acute infectious diseases and gastro-intestinal disorders.

The two cases of cirrhosis of the liver examined by the writer ran a comparatively acute course. The livers on section showed a marked hyperplasia of the so-called new-formed bile ducts.

Focal necrosis of the liver may be a lesion of measles.

Typhoid Fever.

Thirty-one cases are reported by John Harrigan, in the Brooklyn Medical Journal for February, as treated in St. Mary's Hospital.

Hydrotherapy was the essential treatment used. The mortality rate was 9.68 per cent. Rose spots were observed on 13 patients, diarrhea in 15, constipation in 8.

Of the 31 cases, 18 were male and 13 female.

Of the three cases that died, one was sick three weeks before his admission, at which time he was delirious. The second case was sick ten days before his admission and was addicted to the use of alcohol. The third fatal case had been ill for two weeks on admission, was delirious and continued so, dying on the fourth day after admission.

In all the cases the greatest possible care was exercised as to diet, milk being used sparingly and never alone. Farina gruel was much used. In special cases equal parts of milk and water to which egg albumin was added formed the diet. Broths were employed in preference to milk alone.

Widal's reaction was negative in 8 cases, though the clinical history warranted a diagnosis of typhoid.

Beer and other malt preparations were given when the temperature was subnormal.

Alcoholic stimulation was used in very feeble conditions.

Hydrotherapy was carried out by means of the bath, supplemented, when necessary, by the water-coil.

The Hyperplasia of Connective Tissue and its Treatment.

Connective tissue substitution is the result of inflammation without suppuration and may take place in any part of the body writes Geo. Howard Thompson in the Regular Medical Visitor for January. In the lungs it is called fibroid degeneration, in the liver or kidney, cirrhosis in the nerves and other nonglandular structures, sclerosis.

In the treatment of this condition, the bichloride of mercury and the chloride of gold are most valuable agents and are indicated in all forms of hyperplasia.

Mental State and the Making of Wills.

The testimony of an expert alienist should be more sought after than it is in attempting to prove or disprove the legality of a will says P. W. Payne in the *Indiana Medical Journal* for February.

The law allows that anyone is capable of making a will who is possessed of "a sound memory and a disposing mind." But this qualification is not absolute in spirit and intent but it is a relative condition and implies such a degree of soundness as is adequate to the performance of a specific act, the devise of property by will, and no more.

And there are none better able to determine the existence of such a condition than the skilled alienist.

However courts too frequently underestimate the value of expert evidence and failing to embody such information in their instructions, the jury exhausted by a protracted trial and confounded by conflicting statements, is compelled to wrestle with a mass of evidence the relation of which to the real question at issue they are utterly unprepared by education and experience to determine.

It is not irrational to trust that in the evolution of progress the statutes may be so amended as to empower courts, in cases involving mental capacity and criminal responsibility, to call expert alienists to answer such interrogatories as the court may deem proper in order to obtain such strictly professional information as may be indispensable to properly instruct the jury upon the questions in issue, and thus respond to the demands of justice by ridding the jurisprudence of such disgraceful tests as "if you find that the testator at the time he executed the will was of unsound mind, you will find for the plaintiffs," and "if you find that the defendant at the time he committed the homicide was capable of distinguishing right from wrong, then he is liable in the eyes of the law, and your verdict will be so rendered."

The Treatment of Scrotal Hydroceles.

Excision of the sac or parietal layer of the tunica vaginalis is the only certain and radical procedure in chronic cases according to W. McAdam Eccles in *Treatment* for January 25th.

He allows a preliminary tapping which will give relief for a time but advises telling the patient that the fluid will reappear and that he should make up his mind for the radical operation.

The preparation of the parts should be most painstaking and thorough.

The incision should be made the whole length of the swelling closer to the outer side than to the raphe and should be carried down to but not into the tunica vaginalis. The separation of the distended sac is readily made with the finger only requiring the knife here and there. After it has been separated, the fluid is evacuated and the sac wall is cut away to within a quarter of an inch of its reflection on the anterior surface of the testis internally and on the outer side close to its reflection on to the epididymis. The visceral layer is then rubbed over with 1 to 20 carbolic acid solution and the wound closed with fine silk-worm-gut.

The dressing should firmly support the scrotum which should be elevated for two days.

The patient should micturate on his side or better on his hands and knees to avoid fouling the dressings.

If no drainage is used the dressings may be left to the sixth day when the sutures are cut out.

Alcoholism and Suicidal Impulses.

A study of 142 cases of attempted suicide in their relation to alcoholism is given by Sullivan in the *Quarterly Journal of Inebriety* for January. 77.5 per cent. of the cases could be attributed to alcoholism, in the males 84.4 per cent. and in the females 71.8 per cent. 79.1 per cent. of the attempts were made in a state of actual drunkenness. Nearly half of the cases were between the ages of 25 and 35.

The author concludes that the suicidal impulse associated with alcoholism rarely appears until the intoxication has attained a certain chronicity.

In a very large majority of instances the chronic alcoholic makes the attempt during a bout of drunkenness; and in considerably more than one-half of such cases there is amnesia of the act.

In the suicidal alcoholic the chronic intoxication expresses itself, on the one hand, by a variable degree of dementia; on the other, by generalized disorders of function—these disorders of function in viscera which furnish the organic basis of the personality determine a depressed emotional tone, from which the suicidal impulse takes its origin.

The generative organs, especially in women, are peculiarly susceptible to the alcoholic poison, and their disorders play a very important part in producing these emotional alterations of the personality which precede and determine the suicidal tendency.

Some Benefits of Vivisection.

Senator Gallinger is respectfully referred to an article on this subject, by E. Stuver in the Cincinnati Lancet Clinic for February 3rd.

Among the discoveries due to vivisection he mentions how blood nourishes the tissues, how the "chyle is carried into the blood, the processes of intestinal digestion, the difference between the motor and sensory functions of the spinal nerves, the nervous mechanism of the heart and the glycogenic function of the liver.

Our knowledge of the vasomotor system was gained by vivisection, the physiology and localization of the functions of the brain the manner of death by suffocation and the effects of carbonic acid gas came to light in the same way.

The role of nitrogen and oxygen, the function of the pancreas, the modern treatment of goitre and hydrophobia were found out by careful experiments.

The science of bacteriology and the antiseptic treatment of wounds were the direct outgrowths of vivisection.

The treatment of diphtheria, gun shot wounds of the intestines and appendicitis have saved thousand of lives in the past decade and this was only possible by vivisection. Epidemic diseases among domestic animals have been stamped out by the knowledge gained in vivisection.

The very foundations of physiology, chemistry, and sanitary science were laid by vivisection. After showing the falsity of the claims made by the antivivisectionists he closes with the following extract from the Association Journal.

"The crusade of the antivivisectionists from beginning to end has been a series of equivocations, misrepresentations and half truths. They never have dared to tell the whole truth and discuss the question on its merits, and some of the strongest evidence that they have presented is based on statements made by writers who were misinformed when these statements were written but who, later on, had the manhood to acknowledge that they had been deceived by antivivisection literature and retract their mistakes.

Have these zealous humanitarians had the manhood to publish the retractions along with the original? Have these earnest advocates of justice and right had enough true nobility of character to admit that they had suppressed the truth and perpetrated an injustice against their fellow men? We leave the history of the movement and the justice of the people of this nation to answer these questions."

Cutaneous Burns by Heat.

Rayer's classification is preferable to Dupuytren's according to Robert T. Morris in the Post Graduate for January.

In burns of the first degree the treatment is chiefly for the pain and for this he recommends common white paint.

In burns of the second degree if the guarding epithelial layer has ruptured the indications for treatment are chiefly germicidal. For shock use the hot bath, morphine and an anesthetic before removing the clothing or attempting to dress the burn.

The wounded area is washed in bichloride 1 to 2000 and then saline solution, it is then covered with narrow strips of gutta serena tissue and over it absorbent gauze and left on for several days unless the gauze becomes soaked.

In burns of the third degree their is usually little pain but severe shock.

The treatment then is for the relief of shock and the avoidance of dangerous subsequent sepsis. The separation of necrotic tissue is more rapid under moist dressings and they may be hastened by pepsin or caroid.

To stimulate rapid granulations use Balsam of Peru and Oakum.

Skin grafting, by Thiersch's method or by blisters, should be done.

Silberman's theory as to the congestion of internal organs is that it is due to minute emboli from disintegrating blood cells. This may also explain the perforating ulcer of the duodenum.

The bloody urine is probably due to excretion of the decomposed blood cells that have made the round of the circulation and are thrown out by the kidneys.

Bread and Butter.

The dietetics of bread and butter are discussed by John C. Hammeter in the Maryland Medical Magazine for February,

He states that 100 pounds of flour will make, on an average, 136 pounds of bread, and that we usually pay the baker too much for his trouble. So for poor people it is better to bake bread at home, if they know how.

Bread and butter are easy of digestion as they have a synergistic action.

The fat keeps down the hyperacidity of the gastric juice, and so favors the transformation of the large percentage of starch in the bread into maltose and dextrose.

The fat is also a stimulant to the pancreas and an abundance of ferments are poured into the duodenum, and thus the starch as well as the albumen and fat are completely digested.

Neuralgia of the Rectum.

Samuel G. Gant in the Post Graduate for January calls attention to this condition. In the majority of his cases the cause has been either a deviated coccyx or an impaction of feces.

In every case he says that we should search diligently for fissure, ulcer, hemorrhoid, tight sphincters or displaced coccyx.

In the treatment we should endeavor first to correct any abnormality. Keep the bowels open and have the patient rest quietly in bed. Frequent irrigation of the rectum with water or oil as hot as can borne or dry heat over the seat of irritation will lessen the pain.

In one case permanent relief was given by a thorough cauterization of the skin over the affected part with the Paquelin cautery. However a reliable counterirritant for all cases is hard to find so we may try several as aconite, chloroform, capsicum, camphor, turpentine, iodine and the oil of mustard.

Electricity is valuable in some cases, the static current giving the best results.

Forcible division of the sphincters may give relief. He reports one in which perfect results followed complete division of the sphincters after other means had failed.

Periodical Dipsomania.

Some of the remote causes of this condition are discussed by Remondino in the Quarterly Journal of Inebriety for January.

He says that the disease is secondary to physical or psychic defect or it may be due to a diathetic condition analogous to that upon which is grafted gout or rheumatism and in the latter case it is more easily remedied. He considers also a sexual factor that affects celibates but to find a dipsomaniac who is also a celibate would require a very painful search.

Racial proclivity and climate are also mentioned. American climates, owing to their greater dangers and variability and other tendencies to intensify most nervous diseases, favors the disease where a predisposing cause already exists.

How does Albumin get into the Urine?

The normal epithelium presents a perfect barrier to the escape of serum albumin, says M. D. Hoge, Jr., in the Virginia Medical Semi-monthly for January 26, and if by any cause this barrier is broken down albumin escapes. As to the exact portion of the kidney which first undergoes change is somewhat a matter of doubt.

How does albumin get into the urine may be answered by taking the picture with its

cycle of changes as follows: The blood is vitiated by some toxic poison, in the vascular system of the kidneys an irritant inflammation is set up; albuminous serum exudes from the blood vessels and capillaries; the nutrition of the renal epithelium is impaired; the natural lymphatic supply is inadequate to remove the excess; serum albumin escapes partly by means of the glomeruli but mostly by means of the partially or completely degenerated lining of the tubules.

Cerebro Spinal Meningitis.

There is an apparent relationship between this disease and pneumonia says Yates in the Medical Herald for January. The predisposing causes are similar, and frequently occur in the same patient.

The infection occurs frequently in patients suffering with coryza and it is probable that in such cases the pathogenic bacteria enter the system through the nasal mucous membrane.

In adult he considers the free use of opium imperative, morphine hypodermically is the best remedy in the convulsive seizure. Cold to head and spine by means of ice bags, quietness in a dark room, hot foot baths or hot application to feet, bromides and ergot are recommended.

The strength of the patient should be carefully maintained by judicious dieting if the disease is asthenic in character. In children, paregoric, Dover's powder, bromide and cold applications seem to meet the indications. He reports six cases with two deaths.

Scarlatina.

Marcus P. Hatfield begins a very exhaustive paper on this subject in the Medical Standard for February.

As a rule children under 2 years escape. Second attacks are very rare the most of them being rather errors in diagnosis. Mortality variable, in Chicago epidemic of 1898 12.23 per cent. in that of 1859 12.6 per cent.

Three forms, mild, severe, malignant. Incubation two to six days.

Onset sudden, the eruption appearing from twelve to thirty-six hours after initial symptoms.

Average duration of rash seven days, if it has not markedly faded within four days from its appearance, the disease will be prolonged and complicated.

In regard to the diagnosis he says it is safe to treat every case of sudden illness with inexplicable rise of temperature (102 to 105) and sore throat, as if it might be a case of scarlet fever.

A case may be complicated by sloughing in the throat, adenitis, otitis media, broncho pneumonia in very young children, art hritis diarrhea or dysentery, and, the most dangerous of all, nephritis.

The X Ray.

The value of the X ray in diagnosis in bone surgery is beyond the experimental stage and has come to stay, says J. Rudis-Jicinsky in the Western Medical Review for February.

Aneurism of thoracic aorta, enlargement of pulmonary artery, rhythmic dilatation of the heart, transposed heart, mobility and action of this organ are recognized by the X ray.

Central pneumonia, emphysema, early pulmonary tuberculosis, acute miliary tuberculosis, fluid in the chest as in pleurisy, or empyema, pneumo-pyothorax, abscess, colicification of the pleura, adhesion, etc., are also diagnosed early when there are no physical signs or these are confirmed. With a screen the liver spleen, kidney, stomach and bowels may be examined.

As a therapeutic agent the ray is used in lupus, eczema, favus, psoriasis, acne, etc.

As regards the pictures he cautions against certain mistakes that may be avoided by using the fluorometer.

The Case of a Man who Swallowed his Suspenders.

Maurice H. Richardson, in the Boston Medical and Surgical Journal for February 15th, reports the case of a man who had been in an insane asylum for six years and had swallowed his suspenders, at least as much of them as would go down.

On examination the probang encountered an obstruction in the esophagus at or about the transverse portion of the aortic arch, but nothing metallic could be detected. An X ray negative showed unmistakably a suspender buckle at the level of the arch, and possibly another higher up.

An external esophagotomy was decided upon and performed, and though there was a fully developed wound infection at the end of 24 hours with a temperature of 104, the patient made a good recovery, and seven months later was reported well mentally as well as physically.

The author mentions other cases happening in his experience, among others a young woman who swallowed a gold pencil, open safety pin, steel crochet needle and a lot of ordinary pins. The pylorus was opened in which was stuck the open safety pin. The other articles passed safely through the ali-

mentary canal, except the crochet needle, which was never recovered. His first dissecting room subject had her stomach full of straw.

Cataract Operation.

A review of the operative treatment of senile cataract is given by Anderson Critchett in the Journal of the Eye, Ear and Throat Diseases for January-February.

The first extraction was performed by Daviel in 1745, and the flap method was the only recognized means of extraction for more than a century.

Schufft made the first radical change by using a narrow slit at corneo-scleral junction and extracting by means of a spoon after doing an iridectomy.

The senior Critchett, Bowman and Von Graefe devised the method of linear extraction, which was improved by Macnamara and Andrew.

The operations of Lebrun, of Teale, Bell, Taylor and others are described.

He considers ophthalmic surgeons as divided into two classes, the adherents of simple extraction and those who advocate iridectomy.

Graefe and Swanzy advocate the combined operation.

Dilatation of the Colon.

A case in a male child six years of age is reported by F. T. Stewart and Alfred Hand, Jr., in the Archives of Pediatrics for March. The child had been fed on condensed milk from birth. The first appearance of the distension was uncertain but at least from the end of the second year.

Constipation, summer complaint and croupous pneumonia were among the previous diseases. The diagnosis being perfectly plain, treatment was begun by massage of the abdomen with olive oil, the galvanic current, and strychnine.

The case improved some and was transferred to the surgeon but after consultation surgical interference was rejected and the child died from exhaustion. On post mortem the thoracic organs were found normal, the colon was so large that it almost completely hid the small intestines. Ten cm. above the ileocecal valve a constriction was found and another 30 cm. above the anus, between the two were found numerous, large, transverse, superficial ulcerations.

The case was one of hypertrophic dilatation of the colon and rectum which existed from birth and which gave no clue to its origin—an idiopathic dilation of the colon.

The operative procedure best suited for this condition could be definitely outlined at the time of operation only, the objective point being either drainage or removal of the large bowel. If the patient be *in extremis* an artificial anus would be indicated, leaving more radical measures to a later period. If undertaken with the patient in good condition, a resection of the sigmoid might be advisable, as great distention of this portion of the large bowel alone has been observed in several cases; or the ileum might be implanted into the rectum and the lower end of the colon sutured in the abdominal wound so as to drain it, thus side-tracking the entire large bowel and leaving it to atrophy. Few will have the temerity to excise the entire colon or even to emulate Mr. Treves. Enteroraphy or suturing the curling sigmoid to the anterior parietal peritoneum would prevent any kinking of this portion of the bowel.

It seems to us that all cases of chronic constipation with a persistently swollen abdomen should be scrutinized by the surgeon. Often in the congenital form the *post mortem* examination only will demonstrate whether the dilatation be idiopathic or due to a narrowing of the lower bowel or other definite cause. Often in the acquired class it will be impossible to surely differentiate an idiopathic case from one due to partial volvulus or other equal remediable condition. And although the surgeon finds no obvious cause, he may yet adopt a course shaped to save life, mitigate suffering, or cure the patient.

The Removal of Tattoo Marks and of Powder Stains.

A. H. Ohmaun-Dumesnil in the St. Louis Medical and Surgical Journal for February recommends the glycerole of papoid for this purpose according to the following formula, papoid 12 grains, water 60 m. Glycerine 180 m., acid Hydrochlor, dil. 3 gtt. His method of application is as follows:

The tattooed skin is made surgically clean, or, in other words, aseptic. It is first carefully shaved, if necessary, then thoroughly washed with soap and water. After this a thorough cleansing with alcohol is given, and finally a solution of bichloride, one in a thousand, is applied. The skin is anesthetized with a spray of chloride of ethyl. Then the surface which is tattooed is covered over with glycerole of papoid. Next in order is to take a bunch of needles previously prepared and rendered aseptic, and containing from six to ten very fine cambric needles, tightly wound with silk thread, and dip them in glycerole of papoid.

These are then driven with a sharp blow into the tattooed part. This is repeated several times over the entire seat. It goes without saying that this tattooing must be thorough or but an imperfect result will be obtained, on account of the depth at which the pigment is found. And yet the needles must not be driven in too far, but merely far enough to draw the least quantity of blood.

After this curative tattooing the glycerole of papoid is poured over the area worked on and covered over with gauze. In two or three days this latter is removed and the tattoo mark will only present a very light hazy appearance. In a very short time crusts will appear at the points tattooed with glycerole of papoid. These crusts will, in turn, fall off, and the tattooing will be gone. Certain parts may have to be gone over a second time. There is no swelling or inflammatory reaction.

Abdominal Section.

George W. Crile makes some observations in the Cleveland Medical Gazette for January based on 400 operations.

Careful physicals examination is made before operating. Blood count is of value. Too much attention to the bowels is likely to be followed by compensatory constipation.

Except in septic cases intramuscular opening of the abdominal wall is always made no pedicle is left for any operation, instead the dissection is carried out as in operations on the neck or extremities, vessels are isolated and tied the parts cut away and the wound closed by catgut.

In gall stone cases the obliteration of the bladder by removal of the mucous membrane according to the method of Mayo, yields splendid results.

Stimulation before the operation makes it more difficult to estimate the vital resistance of the patient hence no pre-operation stimulation was used.

For shock strychnia, alcohol, posture, heat and normal salt solution. But look out for overstimulation.

The bowels are opened at the end of the first or second 24 hours.

Mortality depends upon the nature of the case. In acute cases of appendicitis with perforation and no walling off it was 50 per cent. Mortality rate in other cases of appendicitis, 128 in number, was zero. It was also zero in 18 cases of ventral fixation in 55 on the ovaries alone, in 27 for tubes alone, in 24 for resection of ovaries and in 57 for both tubes and ovaries. Adding in the 128 cases of appendicitis we have 309

with no deaths. In intestinal obstruction the rate was more than 50 per cent.

In operating for subjective symptoms some failures are reported but in others the clinical results were brilliant.

Intestinal Indigestion and Pulmonary Disease.

There is often a close association between the two according to Chauncey Rea Burr in the Boston Medical and Surgical Journal for February 1.

Under normal conditions the small intestine is practically free from bacteria but if from any cause indigestion occurs it becomes a veritable culture tube.

The liver is a true filter which arrests not only micro-organisms but ptomaines, toxins and toxalbumins in small amounts.

So given a leaky liver and the intestines full of germs and the blood is hard pressed to keep itself pure. The three purifiers of the blood are the skin, the lungs and the kidneys.

If the toxemia is intense all of the eliminating organs may show signs of distress and in the lungs we have congestion, edema or pneumonia and very commonly bronchitis. In such a condition microbic infection of the lungs is not only possible but has actually occurred.

In croupous pneumonia the coagulation necrosis is limited to the epithelial lining of the alveoli that is the bacteria are evidently inhaled but in tuberculosis the exudate occurs outside the alveola and the bacteria must come from the general circulation and often perhaps from an infected intestine. The germicidal action of blood serum depends upon a living albumin the essential element of which is sodium chloride.

Hence the value of normal salt solution in the resolution or digestion of the pneumonic exudate, and in tuberculosis it is valuable.

Fresh air and the cure of intestinal indigestion will do much to improve the condition of those suffering from pulmonary tuberculosis and if begun early enough a cure may be looked for in a certain proportion of cases.

The writer can never forget the extraordinary improvement which once followed his use of a sodium-chloride solution in a case. The patient was far gone in consumption and had been under observation for many months. One morning the word came that he was dying, and on arrival at the bedside it seemed indeed as if dissolution were at hand. There was great dyspnea, the face was pale and bathed in a cold sweat, the pupils were dilated, the pulse

fluttering and almost imperceptible and the temperature 101 deg. F. About three grains of sodium-chloride were dissolved in a teaspoonful of boiled water and this was injected under the skin. In a few moments it seemed as if the breathing were easier. At the end of half an hour there was no doubt of it, and in addition the pallor and cold sweat had gone; the pupils were normal in size, the pulse was regular and perceptible and the temperature had dropped 101 deg. to 100 deg. F.

This patient lived some months longer, but never again had such an attack, and the breathing was comparatively free to the end. The daily use of salted milk or beer had probably much to do with this.

Puerperal Mania with Albuminuria.

C. F. Dutton, in the Bulletin of the Cleveland General Hospital for October, reports a case of puerperal mania following a normal labor, except for a perineal tear.

The first convulsion came on about five hours after the birth of the child, at which time there was no albumin in the urine, however, a few hours later albumin was found and persisted throughout the attack.

The temperature ranged from 99 to 100 most of the time, at one time it was 102 on the ninth day. The patient died on the eleventh day, just before which the temperature rose to 108.

Death was not due to coma, but from exhaustion and collapse.

He thinks the mania and nephritis were both due to autotoxemia, as the convulsions occurred before there had been sufficient time for the absorption of septic poison.

The indications followed were, to quiet the patient, keep up the strength, to eliminate the poison and relieve the kidneys.

The Antidiphtheritic Serum as a Prophylaxis in Diphtheria.

This serum is an almost certain preventative and immunizer, says Edward P. Adams in the Dietetic and Hygienic Gazette for February, and this statement is backed up by experience and statistics.

According to Munn, of Denver, in the Preantitoxin period the mortality rate in 2272 cases was 36.4, in the antitoxin period the mortality rate in 1772 cases was 11.56 per cent. when only half the cases were treated with the serum.

According to Biggs, of New York city, out of 5108 immunized cases only 54 developed the disease, and of these only 3 died, and these were complicated with scarlet fever and sepsis.

The Policy of the State Relative to the Spread of Tuberculosis.

The state care of all the dependent cases of tuberculosis is impracticable says Enoch V. Stoddard in the Medical News for February 10th. The health and vigor of its citizens is a very important matter to any state as upon it depends the productiveness and general welfare of the community.

He defines the policy of the state in the prevention of tuberculosis as involving two propositions.

First, a legislative one, by means of which may be established a system of control of those conditions favoring the development and spread of this disease; and, second, a provision for the establishment of its educational functions by instituting one or more sanatoria, by means of which the knowledge of the best methods of treatment and prevention can be generally disseminated.

In outlining a policy to be followed by the State, it must be understood at the outset that reference is had to provisions by the State for *incipient* cases only, chronic cases being provided for by the several communities in which they are found. Such provision is already rendered possible by the law, enacted by the last legislature, providing for the establishment by large municipalities, in their immediate vicinity, of hospitals for the care of pulmonary tuberculosis. If this capacity of local provision for chronic cases is extended to incipient cases, an important part of the remaining problem will be solved. The State already possesses a well and carefully developed system of protecting the public health. Under existing statutes every city, town and village maintains its board of health. Legislation, extending the powers of such health boards by placing tuberculosis among or in the class of contagious diseases, would at once establish an efficient series of local sanatoria under a carefully devised and expert supervision.

It would not be difficult, therefore, to found a system of state hospitals under the general supervision of the State Board of Health, state hospitals proper being under boards of managers, appointed by the Governor and the Senate, while local hospitals would be managed directly by local boards of health, but being still under a general State supervision. The enactment of a law by the Legislature, containing these provisions, would at once develop a series of local hospitals for the care of incipient as well as chronic cases of tuberculosis, in the vicinity of the great centers of population. These would serve as stimuli to the resi-

dents of the smaller towns and villages in the establishment of their own hospitals. There could thus be adopted and enforced in every household, a policy, in regard to tuberculosis, which would exert a power of prevention sufficient to control the existence and development of this disease, as fully as of smallpox or any other of the contagia.

The General Treatment of Phthisis Pulmonalis.

George A. Evans in the New York Medical Journal for February 17th speaks very favorably of phenol as an antiseptic in association with compressed air.

The so-called crystallized carbolic acid is used in from 25 to 35 per cent. solutions in equal parts of glycerine and water. This is used in the form of a fine spray for 30 minutes every day.

The hygienic management is difficult and detailed instructions must be given regarding the diet and habits.

The author has his diet list and general directions in the form of a little folder which he carries in his pocket.

His diet list is as follows:

May take—

Soups, Broths, etc.—Bouillon; mutton, chicken, oyster, clam, turtle, tomato, barley, rice, bean, pea.

Fish.—All kinds that are found to "agree"—boiled, baked, stewed, or broiled.

Shellfish.—Oysters: raw, roast or stewed.

Meats etc.—Beef, rare, broiled, or roast; chopped beef patties; "Hamburger steak;" lamb or mutton chop, broiled; roast lamb or mutton; poultry, roast or broiled; game, roast or broiled: sweetbreads; brain: predigested meats ("beef peptonoids," "sarcopeptones," "liquid peptonoids," "beef meal," "peptonized beef tea," etc); stewed tripe, gelatin, Neufchâtel or cream cheese, clabber.

Eggs.—Raw (raw beaten with boiled milk, sherry, whisky, sweetened), poached, boiled.

Vegetables.—Greens, lettuce, celery, spinach, asparagus, cresses, cauliflower, Indian corn, young onions, tomatoes; green peas, string beans, lentils, and other leguminous vegetables: potatoes stewed with cream and roasted (sparingly.)

Cereals (sparingly).—Cracked wheat, hominy, oat-meal, rice, wheat, cakes, wheat bread, gluten bread, rye bread, "Graham bread," corn bread, toast, milk toast, zwieback.

Fruits, Nuts, etc.—Oranges, lemons, pears, plums, apricots, grapes, peaches, nectarines, fresh figs, fresh dates, melons, baked apples (sparingly); English wal-

nuts, almonds, filberts, pecans nuts, roasted or boiled chestnuts, olives.

Drinks.—Pure water, hot water, Apollinaris and other carbonated waters, boiled milk (with or without Vichy), cream, milk punch, egg-nog, peptonized milk, kumyss, lemonade, ginger ale (brandy, whisky, wines, and malt liquors as occasion requires), cocoa, chocolate, tea.

Avoid—

Iced drinks, ice cream, water ice, saccharine foods, pies, pastries, puddings, made dishes, salt and smoked meats and fish, all fried food. Starchy or farinaceous foods should be used very sparingly: macaroni, spaghetti, potatoes, turnips, carrots, parsnips, beets, arrowroot, cornstarch, sago, tapioca.

His general directions are:

Retire between 9 and 10 o'clock P. M. regularly.

Arise between 6 and 7 o'clock A. M. regularly.

Remain within doors until at least one hour after sunrise.

Retire within doors before sunset.

Wear underclothing, and all other clothing, adapted to the season of the year.

Eat slowly when the nervous system is tranquil and when the body temperature is not high.

Do not take much liquid during or shortly after mealtime.

In cases of faulty digestion it is better to take small quantities of food frequently—about six times daily.

Spend six hours daily in the open air, protected, if necessary, from wind and rain.

Do not sleep in heated room at *any* time.

Do not sleep or room with another.

Keep one window, at least, open in your sleeping room (up from the bottom) *always*.

Discontinue physical and mental labor, if possible.

Avoid excitement, depressing mental environment, introspection, and violent muscular effort.

Avoid draughts and gusts of air.

Avoid dusty places.

Avoid damp places and foul-air localities.

Avoid auditoriums—viz., theatres, concert and banquet halls, schools, churches, and crowded places of every kind.

Keep a daily (morning, afternoon, and evening) record of the body temperature.

When the temperature is more than 99.5 deg. F., avoid exercise.

When the temperature is more than 100.5 deg. F., lie down until the fever subsides.

When the temperature becomes and remains less than 98 deg. F., a tablespoonful of brandy or whisky in sweetened hot water may be taken.

Tub baths should not be taken. Sponge baths of tepid or cold water, however, are very beneficial.

The habit of breathing deeply and slowly should be acquired.

Never breathe through the mouth.

Should lying on the sound side of the chest excite cough and expectoration, the patient should remain in that position until the cough no longer causes expectoration.

In the light of the present knowledge regarding diseases of the lungs and air-passages, it is the *moral duty* of those who suffer from such affections *personally to destroy, either by fire or by boiling water, whatever they may expectorate*. This may be done conveniently by using a pocket spit cup; or, in case a handkerchief is used, to boil it before the sputum it contains can dry.

Pure carbolic acid, one part, to water, twenty parts, may be used to disinfect cuspidors.

The Inoculation of Malaria by the Mosquito.

A review of the literature of this subject is given by Irving P. Lyon in the Medical Record for February 17th, and like most of the new things in medicine it is really very old. According to Nuttall the idea was advanced by certain Roman writers nearly 2000 years ago,

The later investigators along this line are Bignami, Dionisi, Laveran, Flugge, Pfiffer, Manson and Ross.

And so the inoculation theory has been thoroughly established and can no longer admit of question, that this is the only way that malaria is produced can not be affirmed positively at the present time.

The discovery of the method by which malaria is carried directs us to rational means of combating the spread of the disease. The mosquito must be the object of attack. We need not attack all mosquitoes indiscriminately, but only such kinds as are known to act as host to the parasite, or, so far as yet shown, mosquitoes belonging to the genus *Anopheles*. The commonest house mosquito belongs to the genus *Culex*, and seems to be harmless. Various other genera of mosquitoes are recognized, but they are uncommon and are not known to be carriers of malaria.

It is a surprising fact that comparatively little is known by entomologists in regard to the distribution and habits of the different kinds of mosquitoes, and it is therefore necessary for us largely to develop our knowledge of mosquitoes in this direction.

There are three principal methods of waging a war of extermination against mosquitoes: first, by drainage of the breeding-pools; second, by the introduction of fish into them; and third, by scattering petroleum or other chemicals over them. The first method is well known for its effectiveness; the introduction of fish in the breeding-waters is of value, if they permit the growth of fish, for fish devour and destroy the grubs of mosquitoes; the use of petroleum or other chemical substances on the water has been found to destroy effectually the larvæ and pupæ of mosquitoes. Howard's experiments show that one ounce of petroleum to fifteen square feet of water surface will destroy mosquito grubs and prevent their subsequent development for a considerable period, probably from two to four weeks.

In conclusion he emphasizes the fact that every case of malarial disease may be a menace to the public health, provided the *Anopheles* be also found in the same locality by acting as a focus of infection for the spread of malaria in the immediate vicinity, and it is probable that the periodical appearance of malaria in regions usually free from it is explained in this way. It follows that cases of active malaria should be isolated by mosquito netting or otherwise, as a preventive of the dissemination of the disease.

The Results of the So-called Conservative Treatment of Appendicitis.

Twenty-five cases are reported by Samuel Lloyd in the Medical Record for February 10th.

Of the 25 cases six died, a mortality of 24 per cent. which is rather startling when compared with the statistics of experienced operators.

The Author in comparison gives his own results in 154 operative cases including two who were *in extremis* showing a mortality rate of not quite 2.6. per cent. or only four deaths.

Of the 25 conservative cases 18 gave a history of recurrences. He explains how physicians can report cases that recovered under medical treatment by saying that *they do not follow up their cases*.

He has collected 558 cases taken at random from literature of which 445 resulted in abscess, perforation, peritonitis, etc., illustrating the futility of medical treatment in the vast majority of cases.

Constipation and intestinal indigestion are by far the most constant symptoms. These are accompanied by a great deal of flatulence, by colicky pains in the abdomen

sometimes of considerable intensity and sometimes referable to the appendical region, through more often near or immediately under the umbilicus.

The tongue is usually badly coated, especially toward the back, and the breath is foul. Often eating increases the discomfort, and occasionally the flatus interferes with respiration by pressing on the diaphragm. On examination of the abdomen, tenderness is nearly always elicited by pressure upon the appendix, and that organ is nearly always palpable.

In one patient, the acute symptoms were mistaken for renal colic, and he suffered constantly from indigestion. When he was dying and having fecal vomiting, he said, "That is the stuff I have been tasting all the time during the past year."

One need not go further, than the study of a few series of cases similar to these reported to reach a conclusion that an attack of appendicitis predisposes the patient to a recurrence, and it is also conclusively shown, in this *resume* of cases, that operation offers the best, the safest, and the shortest method of treating the condition.

Rupture of the Liver.

Two cases of rupture of the right lobe of the liver following a direct blow are reported by H. Beeckman Delatour in the Medical News for February 17th.

The rupture was on the under surface in both cases and was evidently due to bending of the organ. The immediate shock was so great that an operation was out of the question for several hours.

In both cases the abdomen was found filled with fluid and clotted blood, the hemorrhage having entirely ceased in one case and in the other it was merely an oozing

Both cases made an uneventful recovery, and two and a half years after are enjoying good health.

The question of when to operate is the extremity and two lateral apertures on opposite sides of unequal size, the smaller eye being at a slightly higher level than the large one.

He mentions the following contraindications to the use of the stomach tube. All gastric affections in which diagnosis is possible without it and in which its therapeutic employment is not necessary; thoracic aneurism; recent hemorrhage from the stomach or any other organ; uncompensated heart disease; advanced age, cohexia and extreme debility and in pregnancy when a tendency to abortion exists.

For diagnostic purposes the tube may be used to remove the stomach contents for

clinical examination (macroscopic, microscopic and chemical). For inflating the stomach, for detection of stricture at the cardiac orifice and for locating the lower limit of the stomach.

For locating the position of the pylorus, for measuring the distance of the lower border of the stomach from the cardiac orifice and transillumination of the stomach.

To ascertain the elasticity of the stomach walls, for investigation of the motor function and for determining the size, form and position of the stomach in conjunction with the use of the X-rays.

In the latter case we introduce the tube and fill the stomach with a bismuth emulsion or use the tube filled with a large shot.

As a diagnostic measure the tube may also be used for curettage of the stomach which may be very useful in the early diagnosis of cancer of the stomach.

Sanatorium Treatment of Consumption.

A report of eight months' trial of the sanatorium treatment is made by N. D. Bardswell and J. E. Chapman, in the Quarterly Medical Journal for February.

The surroundings were the most unfavorable, as the Infirmary is situated on damp soil and was more liable to fap than any other part of Sheffield and is nearer to numerous large steel works and yet in spite of all these drawbacks the results were comparatively good.

The principle treatment is plenty of fresh air and those unable to walk were carried out in the air every day. The bedridden cases were kept quiet by an open window.

The so-called specifics as creosote and guaiacal were tried in some cases, but no better results followed their administration.

Pulmonary and general gymnastics were gone through with regularly and massage and bathing for convalescent cases.

Antiseptics were not used.

Cough sedatives used only in irritative cough, the cough of expectoration was not checked.

The following conclusions are drawn from a review of the eight months' work: During the months from May to September inclusive, patients in all stages of the disease (except a few hopeless cases) improved in every respect.

Since early in October most of the bad cases, which had greatly improved during the summer, have relapsed to a greater or less extent, and the majority of those cases which were, at that time, well on the road to recovery, have improved but slowly or remained *in statu quo*.

Of the thirty-six cases treated, eighteen are at present in-patients, three at least of whom are now fit to return to suitable employment; five are dead; one is continuing to improve under open-air treatment at home, and five are working and continue in good health. Of the remaining seven cases, three, after some six weeks' steady improvement, insisted on returning to work, and have since been lost sight of, and the remaining four, all very bad cases who improved under treatment and then went home, are gradually getting worse.

Apart from their extreme interest clinically, it is useless to admit and improve advanced cases of pulmonary tuberculosis, in hospitals similarly situated as the Sheffield Infirmary, unless such patients can be placed under favorable conditions during the winter months, in which case they would probably continue to improve and possibly might be cured. For this purpose a suitably situated sanatorium is urgently needed.

From a purely commercial point of view (to obtain the best return for money spent per bed) cases admitted for treatment would have to be very carefully selected, preference being given to those with early or limited active lesions, little or no constitutional disturbance, and unimpaired digestion. In the majority of such cases which have been under treatment the disease has been arrested, and the lungs have well progressed towards healing, and in several cases apparently completely healed. Whether their results will be permanent or not, time alone can determine.

It is also an advantage for the patients, especially males, to be young, as they can usually give up their previous occupations, which are often very injurious, for some more suitable. Married women and men almost invariably have to return to the same conditions under which they contracted the disease, a man usually being unable to obtain a living wage at any form of work except at that to which he has been brought up.

Large Solitary Tubercle of the Heart.

A case of tuberculosis which showed large solitary tubercle of the heart on autopsy is reported by A. W. Hoisholt in the Occidental Medical Times for February.

Patient was male age 36 years and was admitted to the hospital six years before his death. Personal and family history negative.

He gradually became insane, and four years after admission had an attack of pleurisy from which he slowly recovered. Later an abscess formed about the 8th rib below

the heart dullness which was opened but reformed twice.

The fifth year of his stay in the hospital he developed pulmonary tuberculosis and several abscesses formed about the ribs and sternum. Dyspnea, quick and feeble pulse, cyanosis and edema developed successively and increased until the patient's death.

Autopsy showed necrosis of the sternal ends of the 3rd, fourth and 5th ribs.

Along the center of the wall of the left ventricle a tumor mass was found to project into and almost reach the center of the cavity which on microscopical examination showed the usual elements of tubercle with caseous centers and giant cells. The tuberculosis in the above case was evidently primarily located in the left pleura, and from here extended by contiguity to the pericardium, bronchial glands, ribs and sternum. The tuberculous pericarditis led to the development of subpericardial tubercles, which by conglomeration formed two large, solitary tubercles, one situated about the center of the wall of the left ventricle, the other in the right auricle, below the arch of the aorta, the tuberculous process burrowing into the myocardium.

Inflammation in Amputations and Fractures.

The vital essence of inflammation remains to-day as great a mystery as ever, says Thomas H. Manley, in Gaillard's Medical Journal for February, but the control of local inflammation in severe traumas of the extremities is one of the greatest concerns of the practitioner. An open fracture *per se*, is not especially prone to violent inflammatory changes and when grave local conditions follow an open fracture it is not from damage to the bones, but the soft parts.

No known agent will prevent inflammatory changes after the crushing of a limb, in fact, these changes are indispensable in repair, but we can eliminate the introduction of pathogenic bacteria, not by chemical antidotes, but severe cleanliness, not perfunctory, but radical and thorough, through the free use of pure water, through sterilization and through porous absorbent dressings.

Of course, in infected inflammations, antiseptics is our sheet anchor in combatting the advances of local destructive changes.

Indiscriminate or injudicious drainage provided a superb portal for atmospheric infection when the tube was employed. This has been sent to Limbo, and now only in suppurative inflammation or suspected

hemorrhage is tubercular drainage employed.

Constitutional treatment and internal medication always exercise an important influence in all serious osseous injuries accompanied by severe grade of inflammation; without proper attention to these the most skilful attention to local conditions will count for nothing.

The Plantar Reflex and Babinski's Sign.

A new and important sign of spinal disease is described by F. W. Langdon, in the Cincinnati Lancet-Clinic for February 17th.

The normal reflex response to slight plantar irritation, in adults and in children after learning to walk is by flexion of the toes; whereas in all persons with lesion of pyramidal tract the response was by extension of the toes. The only exception occurs in infants who have not walked when extension is the normal response and is due to the incomplete development of the pyramidal tracts at that age.

Babinski first called attention to the practical importance of variations in the plantar reflex as indicating the presence or absence of the lesions of the pyramidal tracts of the cord. So the condition is called Babinski's sign.

Even in slight or partial lesions of the pyramidal tracts the normal flexor response is always interfered with in some degree.

After a careful study of 110 cases the author confirms all the claims of Babinski and Callier in regard to the extensor response in lesion of these tracts and that the sign is practically pathognomonic.

Fracture of the Patella.

A case of fracture of the patella is reported by Joseph B. Bissell, in the New York Medical Journal for February 10th, in which complete union followed an open operation seven months after the injury.

The patient was a male, aged 48, and the fragments had not been drawn nearer together than half an inch by the previous treatment.

A long transverse incision was made over the centre of the joint, and fragments after cleaning out the intervening tissue was wired together. The wire gave way under the tension, and two weeks later he reoperated using heavier wire. A vertical incision was made on and above the upper fragments, thus releasing the adhesion, after which the fragments were brought together very easily. The wound healed by first intention with firm bony union and the patella freely movable upon the joint surface.

Etiology of Locomotor Ataxia.

Heredity is not a cause though an individual may bring with him into the world a nervous system predisposed to tabes according to David I. Wolfstein in the Cincinnati Lancet-Clinic for February 24.

Ergot, lead and nicotine may produce tabes and exposure, cold and wet are perhaps responsible for a few cases.

Trauma is also an etiological factor in certain cases. Gonorrhea, sexual over-indulgence and alcohol are agents which may bring on the disease. The theory of syphilitic origin he does not consider trustworthy.

Edinger's theory of "over-exertion" is sanctioned though it falls short of a complete explanation. For instance the infrequency of optic atrophy.

Although this theory of Edinger is not entirely adequate, it does open our eyes to a possible explanation of the peculiar localization of some of the tabetic lesions. It shows us how function itself may precipitate cellular exhaustion, how exhaustion may end in degeneration, and what it is that makes one exciting cause about as potent as another.

The following conclusions are to be drawn from the paper:

There is no direct relationship of cause and effect between syphilis and tabes.

Lues is one of a group of favoring or exciting causes. It is associated with tabes in larger percentage than any of the others named.

The very nature of tabes, with its enigmatic and seemingly capricious localization together with the irreconcilable difficulties apparent in attempting to uphold the luetic etiology, should dispose us to seek elsewhere for explanation of its causation.

It is probable that the common basis favoring tabes is some precedent tissue inferiority, and that the underlying factors are congenital predisposition and functional exhaustion.

There is no practical therapeutic value in upholding the syphilis theory and its general acceptance should be relinquished on the ground of "not proven."

Early and Late Operations in Appendicitis.

The very conservative Englishman is waking up to the fact that early operative treatment is demanded in many cases of inflamed appendix. C. Mansell Moullin in the American Journal of Surgery and Gynecology for February advocates operation at the earliest possible opportunity in all those cases which have not shown definite signs of improvement in 36 hours.

In regard to recovery from appendicitis

with medical treatment, he mentions a case of a man who had a severe attack 50 years ago and of course was not operated on and has had no attack since but he has never recovered and there is still a mass to be felt in his iliac fossa.

He will say that in instituting a comparison between cases operated on and those who are not, the recovery must be complete and permanent.

Taking one hundred cases, such as are usually admitted into hospital, twenty-eight (Hawkins) will suffer from local suppuration or diffuse peritonitis and be operated on. Of the remaining seventy-two cases, thirty-six patients, or more than one-third of the whole, will suffer from one or more relapses, in each of which they will incur the same risk again, and each of which will lay them in bed for an average period of twenty-five days. It seems that it would require some hardihood to assure a patient at the beginning of an illness, of which the course and termination are entirely uninfluenced by medical treatment, that an operation is unnecessary when, even if he gets off with his life, the chances of his making a perfect recovery without operation are little better than one in three.

If in a case of inflamed appendix thirty-six hours have passed without definite improvement having shown itself, the responsibility for the consequences must rest with those who recommend that an operation should not be performed.

Tumors in Pregnancy and Labor.

Ovarian tumors and fibroids of the uterus complicating labor and pregnancy are discussed by Albert A. MacDonald in the Canadian Practitioner and Review for February. If the tumor is discovered before labor it should be removed especially if it is low down. An interstitial fibroid will not only give rise to difficulty by its mechanical obstructive effect, but also by preventing the proper uterine contractions for the expulsion of the child and separation of the placenta.

Ovarian tumors are not greatly dangerous but they may slip down and impede delivery or they may burst. He states that normal fluid from an ovarian cyst is well tolerated by the peritoneum and it is only when some degenerative changes has taken place that it is hurtful.

He advises operation if we see these cases during pregnancy as the danger from an ovariectomy is not specially increased by the pregnancy. The operation may bring on an abortion but the woman is at least cured of her diseased condition and if she should

again become pregnant she would not have a tumor to trouble her. In regard to fibroids, if the patient is already in labor wait, if possible, until the os uteri is dilated, or at least dilatable; then with the patient in the lithotomy position, disinfected, and under complete anesthesia, make a thorough manual (not digital) exploration. If it is possible to push the tumor up above the brim do so, and then apply the forceps, and deliver. Such a procedure is not always very easy, for just when you have the tumor up and the head coming down, one is often doomed to disappointment by finding the tumor slip down in the way again. Success is favored in this as in many other obstetrical operations by complete anesthesia, and it is better to try this plan with care before resorting to podalic version, for though version may be easy enough, its accomplishment does not complete the delivery, for even though the body of the child may be made to pass the obstruction the head is apt to be so pressed upon by the tumor that it will be impossible to deliver it without perforation and reduction of its bulk which in the after-coming head is no easy matter.

Operation on the Pharyngeal Tonsil, Hemophilia, Death.

Richard Sachs, in the *Journal of Laryngology* for February, reports a case of hemophilia in a boy ten years old following an operation on the pharyngeal tonsil, the child dying from hemorrhage four days after the operation in spite of all that could be done to check the leakage of blood.

The boy's grandfather (maternal) had a fatal parenchymatous bleeding of the kidney at the age of 42.

The author recommends that it should be the invariable rule to inquire, before operating on adenoids, about every detail concerning the patient.

Often, however, the children are very young and it may be quite impossible to get any reliable answer from the parents concerning the question of hemophilia.

In the case reported the family history all came out after the operation had been performed and when the knowledge was useless.

Gastric Ulcer.

Every physician should be familiar with the symptoms and signs of gastric ulcer, because of its insidiousness and the grave dangers attending a failure to recognize and treat it in time, says Boardman Reed in the *International Medical Magazine* for February.

The most prominent symptoms are, pain, hemorrhage and circumscribed tender spots. The pain may be of any degree of severity, and is not felt when the stomach is empty, or when only liquid food is taken. The hemorrhage may reveal itself by the vomiting of fresh blood or by dark changed blood, or by the passage of tarry stools. The amount of blood is variable. Marked tenderness over a small circumscribed area in the epigastrium is one of the very constant signs.

Vomiting is another rather frequent symptom, especially after taking food, and the ejecta are most frequently partly digested food containing a normal or an excess of free hydrochloric acid. The appetite is usually good, often excessive.

Among the complications we may have fatal collapse from erosion of a large vessel, perforation with local or general peritonitis and subphrenic abscess. In five to six per cent. of cases gastric ulcer is followed by cancer.

Cancer of the Intestine.

A case of cancer of the intestine treated by operative interference with good results is reported by M. C. McGannon in the *Medical and Surgical Bulletin* for January. The patient was a male age 29 and a diagnosis of appendicitis had been made on account of severe pain, nausea, vomiting and constipation.

After careful examination the tumor was diagnosed cancer and an operation advised.

Under chloroform anesthesia an incision five inches long was made in the right semilunar line, exposing the ascending colon and the cæcum. Examination showed a ring of infiltration surrounding the ascending colon near the hepatic flexures. The cæcum and appendix were drawn up and adherent to this zone of infiltration. There were a few mesenteric glands enlarged. Resection of the ascending colon was decided upon. Without enlarging the original opening the cæcum and ileo cecal valve were easily reached, and the ileum constricted by an elastic ligature three inches from its junction with the cæcum and clamped at the latter situation. The gut was then divided between these two points and the cut ends enveloped in sterile gauze. The transverse colon was next isolated and compressed by an elastic ligature placed about three inches from the hepatic flexure, and a clamp was applied to the gut near the tumor. The transverse colon was divided an inch from the hepatic flexure. The peritoneal cavity was protected by gauze applied to the divided gut. The mesentery of the ascending colon was

then opened up, its vessels secured and ligated and the enlarged glands dissected out. A large size Murphy button was used to unite the ends of the divided ileum and colon and a row of Lambert sutures covered completely around the bowel at the point of junction served to make the anastomosis more secure. The opening in the mesentery was closed with fine silk, the abdominal incision with chromicized catgut, each layer being sutured separately.

The patient was put to bed in good condition, but suffered very much from nausea on awakening from the anæsthetic. This nausea was a troublesome feature until after the fifth day, when the bowels acted. On the tenth day the button passed, after which the bowels acted daily.

Examination of the pathological specimens demonstrated that the carcinomatous infiltration had so narrowed the lumen of the gut that a small lead pencil could not be passed through it.

Morphinism.

Morphia is productive of more serious consequences than is the habitual use of any other drug, according to C. C. Stockard in the Atlanta Journal-Record of Medicine for March. While cocain damages far more rapidly, the ill effects come on so soon that something is done before irreparable injury is sustained. He states that difficulties of leaving off cocaine are not nearly so great as in the case of morphia, nor is relapse so likely to occur.

He prefers to suddenly withdraw the morphia, but in some cases it is better to do so gradually, and in such cases baths, electricity, massage and tonics are used to build up the general health.

If the general condition is fairly good stop the drug at once, as the reaction is more prompt, and one builds up more rapidly.

A very important thing to watch after, is the possibility of relapse and the "after cure" should be closely looked after for from three to six months.

Empyema.

The surgical treatment is the only treatment that we can rely upon, writes R. D. Alexander in the Texas Medical Journal for February.

He says that aspiration is worth nothing except as a palliative and diagnostic measure, and as soon as we find pus cells in the effusion we should empty the cavity and give free drainage. In recent cases a simple incision and a drainage tube is all that is necessary, a long tube is best as it forms

a syphon and so keeps the cavity always drained.

Four cases are reported; in one the author thought that the empyema was due to impaction of the bowels, as the pus had a fecal odor and there was evidently a fistula leading into the colon from the pleural cavity.

However, the patient made a good recovery after incision and thorough drainage.

The only fatal case was thought to be tubercular in character, that is the empyema was of tubercular origin.

Removal of Both Uterine Appendages During Pregnancy.

Thirty-eight cases are reported by J. Wesley Bovee, in the American Journal of Obstetrics for February, 23 being for various kinds of ovarian cysts, 1 for tumor of both ovaries, 6 for pus tubes, 3 for chronic salpingo-oophoritis, 1 for large inoperative uterine fibroid, 1 for hystero-epilepsy, 1 for parovarian cyst, and in 2 cases the reason was not given.

But one death occurred in the 38 cases, a mortality of 2.6 per cent. So then this operation may be performed during pregnancy with the same impunity as when this complication does not exist.

In many cases the presence of ovarian tumors is not noticed until pregnancy has advanced some months, being accounted for by the fact that the enlarging uterus pushes them up out of the pelvis to a position in which they are more readily discovered, or it may result from the unusually rapid growth of tumors of the ovary or the uterus taking place during pregnancy, which has become an established fact.

Methylene Blue in Malaria.

While quinine is a very good medicine in malaria, we are always looking for something a little better than the best.

J. W. P. Smithwick, in Merck's Archives for February, calls attention to the value of methylene blue as a substitute for quinine in malaria. He gives it in two grain doses six times daily, and on account of its bitter taste, in capsules. He finds it a very quick and efficient remedy for all forms of malaria, producing none of the unpleasant effects of quinine. After the treatment of fifty cases of malaria with this agent he concludes that it is a perfect succedaneum for quinine, and may be given whenever the latter drug is indicated in the treatment of malaria of every form and under all conditions, with the same confidence that has always attended the administration of quinine.

Patients need not be selected on account of idiosyncracies, as no bad effects ever follow the use of methylene blue, if given intelligently. It is the remedy to use in malaria with hematuric complications, as it acts in a two-fold manner.

It is the remedy to be given in malaria occurring during the pregnant period, as it has no oxytoxic effect and will cause a freer action of the kidneys, which is also beneficial.

Vaccination.

A safe rule is to vaccinate in infancy, a second time when the child starts to school, a third time at the age of puberty, and a fourth time between 20 and 25 years of age, according to W. H. Wilder in the Alabama Medical and Surgical Age for February, and in this way he thinks that immunity can be established for life.

Morrow's mortality rate is, in the unvaccinated 35 per cent., one good scar 7.73 per cent., two good scars 4.7 per cent., three good scars 1.95 per cent., and four or more scars $\frac{1}{2}$ of one per cent.

Antiseptics are of no special use, simply wash the place with soap and water,

Do not draw blood, if you do dry it off before applying the lymph.

He thinks a larger amount of virus necessary in secondary adult vaccination than in children for the first time.

The mortality of the complications of vaccination is given as one in 65,000, all of which complications are preventable.

The vaccinated limb requires little care other than some mechanical contrivance to protect the scab. For excessive inflammation he recommends hot carbolic solutions and a powder of equal parts of boric acid and acetanilid to dust on the granulating wound.

Santonin in the Treatment of Epilepsy.

G. Frank Lydston, in the Therapeutic Gazette for February, says that upon the average, epileptic patient shows better results under santonin than under the bromides, that santonin acts well in cases in which the bromides for one reason or other are not tolerated at all, and that santonin gives distinctly beneficial results where the bromides fail altogether. Further, santonin is free from injurious effects which cannot be said of the bromides.

In the adult he begins with a dose of from two to five grains of the powdered drug, and this is gradually increased to the point of tolerance. He states that many patients will tolerate 20 grain doses three times daily for some weeks.

As a rule the dose is increased to 15 grains three times daily.

The best criterion of the tolerance of the drug is its action on the genito-urinary tract. With the yellow urine there is some irritation of the kidney and bladder.

Frequent and painful micturition is the most important clinical feature.

Of course, caution is necessary in the administration of so powerful a drug, and the increase should be gradual.

Bromides may be used in connection with santonin, as 60 grains of bromide of soda at bed time and the santonin during the day, or the two remedies may be given alternately.

Posterior Urethritis and Prostatic Abscess.

The relation between posterior urethritis and prostatic abscess is that the latter is usually an extension of the former along the prostatic ducts says Ramon Guiteras in the Therapeutic Gazette for February.

Posterior urethritis usually begins at the end of the second week of an acute attack of gonorrhea. The symptoms are: Frequent and precipitate urination, tenesmus and pain in the deep urethra after micturition, and perhaps rectal tenesmus, together with a feeling that there is more to come away after the act has been apparently completed, and perhaps bleeding after expelling the last drop; pus in the urine; diminution of discharge by the meatus; pain and sensation of heaviness in the perineum. Constitutional symptoms: General depression, headache, loss of appetite, constipation, and more or less fever.

The treatment is laxatives, the balsams as copaiba, cubebs, santal oil, etc., salicylates and benzoate, austisposmodics as morphia, codeia, belladonna, hyoscyamus and the bromides. Hand injection should be discontinued. Irrigation with permanganate of potash in acute stages and nitrate of silver in later and chronic cases. Hot sitz baths are also useful.

The treatment of prostatic involvement follow along the same lines especially during the stage of pus formation, but surgical interference may be required in addition.

Quinine and whisky are recommended if the patient is septic. As a rule these abscesses open into the urethra or the rectum.

Perineal incisions into the prostate to evacuate abscess content are dangerous but if desirable a simple semilunar incision in front of the anus is best.

Prostatic massage very useful after the abscess has burst.

Retention due to abscess is due to the pouting of the abscess into the lumen of the

urethra, and should be treated by frequent catheterization. If after careful efforts the catheter cannot be passed aspiration is indicated.

The injection of local anesthetics as cocaine or eucaïne is not worth much in relieving spasm. The author closes by emphasizing the value and importance of the hot rectal douche in active stages of prostatic disease and in combination with rectal massage in the later stages.

Compound and Comminuted Fracture of the Leg and Ankle.

Three cases of this fracture are reported by E. H. Griswold in the Fort Wayne Medical Journal-Magazine for January in which he used a bar iron interrupted splint with the very best result.

The first case was a compound comminuted fracture about two inches above the ankle joint. After cleaning the wound sawing off the sharp edges and wiring the bones the leg was put up in the iron splint.

A bar of iron was procured one inch wide and $\frac{1}{8}$ of an inch thick and long enough to reach from the toes to the heel and to make a curve to the thick part of the calf and then to the middle of the thigh. Three pieces of thick webbing was riveted to this, one piece for the foot, one for the calf and one for the thigh.

The splint was then secured with plaster bandage from the toes to the heel and from the calf to the middle of the thigh leaving the leg entirely uncovered from the ankle to the middle of the leg.

Continuous irrigation was used for ten days when all discharge ceased and rapid repair ensued.

The second case was a compound dislocation of the ankle with crushing of the astragalus and the third was a comminuted fracture of the leg extending into the ankle joint. They were both treated with the bar iron interrupted splint and made good recoveries considering the gravity of the injury.

He contends that this splint as a dressing for fractures of a severe nature of the lower half of the leg and of the ankle answers all the demands of a perfect fixation splint, insures the absolute comfort of the patient and when swung by a "Hodgen or other swing, permits the patient to move about in the bed with perfect ease, allowing the changes of linens and even the bedding without discomfort. The seat of injury is left free for inspection and the carrying out of such treatment as the circumstances of the case may demand, without disturbance of any part of the fixed dressing or

any possibility of disturbing the relation of the parts comprised in the injury. Temporary dressings may be supplied as often as required and perfect cleanliness of the permanent dressing maintained against all effects of drainage or irrigation.

It obviates the necessity of any extension appliance or the use of a fracture box which is no small consideration in the interest of the patients' comfort, and the pleasure of the surgeon and nurse in caring for the limb. It possesses all the advantages of other splints devised for the treatment of this class of injuries and none of their disadvantages. There are a few cardinal principles which should ever be our rule and guide in the treatment of this class of injuries. They may be enumerated thus: Life of the partially severed member; antiseptics; removal of all foreign substance; perfect coaption and fixation; drainage and maintenance of perfect cleanliness; secure the comfort of the patient.

Diffuse Infective Peritonitis.

The source of the infection has much to do with the activity of the inflammation according to Charles H. Goodrich in the Brooklyn Medical Journal for March.

Other modifying circumstances are the number of bacteria introduced, the virulence of the particular germs, the particular ptomaines produced, the part of the abdomen invaded, the general health of the patient when the inflammation ensues, the presence of good culture media as effused blood or exuded serum and in post-operative cases the excessive handling of peritoneal surfaces.

The author then reports 28 cases of diffuse infective peritonitis; seven recovering (twenty-five per cent.)

Three of these cases were moribund when admitted to the hospital.

The majority of these cases and a large proportion of all cases of diffuse peritonitis are due to previous disease of the appendix vermiformis.

The majority of fatalities were due to unwisely prolonged medical treatment.

Pancreatitis is too often overlooked.

The appendix should be removed whenever the abdomen is opened for an inflammatory condition.

It is a question whether artificial drainage of these cases is wise when on necrotic abscess-wall ("pyogenic membrane") exists.

There are many niceties of technique, which may be saving elements in any case. No measures for prevention of infection can be too extreme, despite the ridicule of

those who are satisfied with the *ordinary* aseptic and antiseptic precautions.

However scientific the thorough mopping of the serous coat of the intestines may seem, the important element of shock must not be forgotten.

100 Peritoneal Sections.

A study of 100 cases in which peritoneal section was done is made by Emory Lanphear, in the Regular Medical Visitor for February, with special reference to mortality.

All the cases occurred in his own practice during the past year and the mortality rate was 15 per cent. There were 19 cases of appendicitis, 16 recovered, 3 died; 8 cases of hernia, 7 recovered, 1 died; 7 vaginal sections, with no deaths; 43 abdominal sections, with 7 deaths; 16 vaginal hysterectomies, with 3 deaths; 7 abdominal hysterectomies, with 1 death.

His rule in appendicitis is: "operate when symptoms indicate it," and he does not believe in operating as soon as the diagnosis is made in all cases. His mortality rate in this disease was 9 per cent.

Several of his deaths he claims was caused by the condition of things at certain of the St. Louis Hospitals, and he thinks when St. Louis gets a truly modern hospital he may possibly do better.

Simple Fractures about the Elbow Joint.

Fractures near or involving the elbow joint are common and ten varieties are recognized by Samuel Lloyd in the Post-Graduate for February. They are, supracondyloid fracture of the humerus, separation of the epiphysis, T-fracture of the condyles, fracture of the internal and fracture of the external condyle, fracture of the epicondyle, of the olecranon process, of the coronoid process, of the head of the radius, and of the neck of the radius.

Three of these are usually extra-capsular and do not involve the joint.

In all these fractures it is well to warn the patient in the presence of witnesses that there is very decided risk of the motion of the joint being impaired, perhaps completely lost.

In the supracondyloid fracture, the arm should be put up flexed to an angle of about 40 deg, the angle being measured on the anterior surface.

In T-fracture of the condyles the arm may be first put up on a straight splint, but as swelling disappears the arm should be flexed and the dressing reapplied until a

full degree of flexion is obtained without disturbing the fragments.

In fracture of either condyle, if it is impossible to get the fragment into place, it is better to cut down and remove it rather than to allow it to become fixed in a position that will not permit of future free use of the arm.

For fracture of the olecranon an anterior splint is used after having first bandaged the hand and forearms, and the fragments should be drawn together with adhesive plaster and all closely watched to see that there is no separation. If the fragments can not be made to approximate they should be wired.

In fracture of the coronoid process, the head of the radius or its neck, the arm should be flexed and fixed in plaster or splint.

In applying plaster in recent fracture he recommends cotton batting to envelope the limb so as to allow for the swelling, after the swelling has subsided the plaster should be removed and put on anew over a roller bandage.

The Nervous System and Albuminuria.

J. H. Brownlow in the Medical Times for March discusses the influence of the nervous system in the pathogenesis of albuminuria. After a critical review of the generally accepted etiological factors in acute and chronic albuminuria he concludes that all the alleged causes of acute albuminuria, with the exception of the toxins of scarlet fever and diphtheria, are devoid of specific pathogenic power, and should not be accepted.

That the opinion of leading authorities that these toxins primarily act on the tissue elements of the kidneys, causing inflammation of these organs and resulting in acute or chronic albuminuria, is unwarranted and controverted by anatomical and physiological principles.

That in the highly organized and susceptible nervous system, with its primary, perpetual and controlling dominion over metabolism, is to be found the primary morbid process from which all the other grosser lesions are the direct results.

That as in acute albuminuria the true etiological factors are the *toxins of scarlet fever* and diphtheria, so in the chronic form *auto-toxins* are the active pathogenic factors, and their specific action is primarily evidenced on the nervous system.

That severe mental strain, intense worry, deep and profound sorrow, the silent grief of domestic and financial misfortune, are the most active predisposing causes in albuminuria.

That the obscure and constant nervous manifestations are more reasonably accounted for on this theory than upon any other.

That the pathological conditions found in the renal organs, arterial system, brain, spinal cord, and sympathetic ganglia are local manifestations of a deranged and diseased nervous system, developed by auto-intoxication and resulting in deranged metabolism.

The Stomach Tube.

In a previous article in *Treatment*, F. Hampson Simpson discussed the use of the stomach tube for the purpose of diagnosis, and in the same journal for February 22d, he considers the use of the tube as a therapeutic measure.

As such it may be used for the mechanical emptying of the stomach after acute poisoning, for lavage or forced feeding, and for the alimentation of the patient in dysphagia from paralysis.

He states that gastric lavage was first proposed and practised by Kussmaul in 1867 for dilatation.

The conditions in which lavage is indicated are evidence of marked motor insufficiency (retention) irrespective of the size of the stomach; chronic gastric catarrh; acute fermentative dyspepsia; in Reichmann's disease or the continuous form of hyperchlorhydria; in so-called acute dilation of the stomach (gastroplegia); to arrest severe hemorrhage from the stomach; in the vomiting of pregnancy; in all forms of chronic vomiting of gastric origin in infants and for the prevention of vomiting during and after the administration of anesthetics.

The tube may be used to apply intragastric electrical treatment, and for intragastric douching, and for performing so-called "internal massage" of the stomach.

Sliding Hernia of the Large Bowel.

Robert F. Weir, in the *Medical Record* for February 24th, calls attention to the treatment of the sliding hernias of the cecum and sigmoid flexure.

He says that the natural looseness of the peritoneum in the iliac regions often allows the slipping of the large intestine into the hernial sac. In such cases the peritoneal sac of the hernia may be deficient usually on its postero-lateral aspect. This, of course, does not happen in all cases of hernia of the large bowel, but when it does occur he recommends the covering of the intestine be made by peritoneum from the incomplete sac after the bowel has been freed.

He reports ten cases, six being sigmoid hernias with complete sac, and in two cases it was necessary after freeing the bowel from its bed to cover it with the peritoneum of its incomplete sac, and then finally reduced.

Four cases were of the cecal variety, three having a complete and one an incomplete sac which were treated as the sigmoid cases, with good results.

X Ray Examination in Children.

Francis H. Williams, in the *Journal of Electro-Therapeutics* for February, calls attention to the better results obtainable in X ray work in children as compared with adults. Especially in examining the large cavities is this true. The thorax and abdomen can be examined with ease, in fact we must be careful not to have the light too strong or the exact outline of organs may be vague and indistinct. The border of the heart, for instance, might not be well defined because the edges are penetrated by the rays, and the shadow of the heart cast upon the screen would be smaller than the heart itself.

He mentions a case of a child six years old in which a diagnosis of cerebro-spinal meningitis had about been made when an X ray examination showed pneumonia.

In 3,000 examinations he has had no untoward symptom following the use of the ray.

Dying Declaration.

The physician is often a witness in such cases and at times the sole witness of such declarations. Andrew J. Hirsch, Esq., in the *Medico-Legal Journal* for December suggests that physicians should have the power to administer oaths and so be able to place the patient under the responsibility of an oath while arousing in him the hope of recovery.

Provision might be made that the physician thus take the statement of the patient, and if time and circumstance permit, that the party to be affected be notified of the same, and have afforded him an opportunity either before the same physician, or before some one else authorized to administer oaths, to cross-examine the declarant. If the party to be affected be not known or not accessible, some public official, as for instance the State's Attorney, or perhaps some justice of the peace, or judge of a Court of Record, or perhaps some commissioner to be appointed by such judge, should be charged with the duty of such cross-examination, and the same should be put at the disposal of all parties who may be found in interest.

Or yet again, the physician himself might, by force of law, if no other plans be practical, be authorized to conduct somewhat of a cross-examination, at least to the extent of testing the mental capacity, the motive, the memory, the perceptive powers, and in general the truthfulness and accuracy of the declarant.

The Bacteriology of Pneumonia.

In normal lungs and in many diseased lungs we frequently find the pneumococcus present according to R. B. H. Cradwohl in the Interstate Medical Journal for February. It needs then no further multiplication of bacteria to set up a pneumonia, but only the existence of conditions which lower the resistance of the lungs and permit them to be attacked by an acute inflammation of the kind seen in pneumonia. He concludes that the micrococcus lanceolatus is responsible for seventy-five per cent. of the cases of acute lobar pneumonia.

That the pneumo-bacillus of Friedlander is not often the cause of pneumonia, but is to be regarded more in the light of an accidental micro-organism,

That suitable conditions must prevail before the micrococcus lanceolatus can excite a pneumonia—systemic depravity, in other words.

That the pneumococcus is a resident of nearly all normal lungs, and that it only requires lowered resistance on the part of the lungs and body to set up a typical pneumonia.

That the pneumococcus, although ubiquitous in its localizations in the body, is especially active when brought in contact with serous surfaces; and, finally, that the pneumococcus is not the cause of epidemic cerebro-spinal fever, the diplococcus intracellularis being the specific agent in that disease.

Malignant Tumors of the Kidney in Children.

The most common tumor of the kidney in childhood is sarcoma, says J. Thomas Kelley, Jr., in the American Journal of Obstetrics for February, and it usually develops in the first two or three years of life and often grows to an enormous size.

Among the causes assigned are, trauma, heredity, calculus irritation, following infectious disease, as an exanthem and misplaced embryonic tissue.

The most characteristic symptoms are the tumor mass, hematuria, pain and cachexia, with a number of secondary symptoms caused by pressure, as vomiting, dyspnea, edema, jaundice, etc.

Medical treatment is of no avail, but if

operation cannot be done Coley's serum is advised.

If the tumor is small it should be removed by the extraperitoneal method, but if large the peritoneum may be opened as for other tumors. He reports a case in a child 8 years old, and on operation the tumor was found adherent to the liver and adjacent viscera, and was separated with difficulty.

The patient died on the afternoon of the third day from shock and exhaustion.

The microscope showed the mass to be small round cell sarcoma.

Traumatic Popliteal Aneurism.

A case of popliteal aneurism in a man, aged 39, resulting from a 48-caliber pistol wound is reported by J. T. Dunn in the American Practitioner and News for January 1st.

On operation the artery was found shot almost entirely in two. It was tied above and below the injury with No. 4 chromicized catgut.

After further examination an opening was found in the popliteal vein, and fearing the risk of ligation he attempted to suture the rent, but without success. The artery forceps were then used, catching up the walls of the vein in the middle of the rent, which closed the opening without much reduction of the caliber. The wound was then closed on each side close up to the forceps with the exception of the portion occupied by the forceps, a small piece of gauze being carried down to the bottom of the wound.

The patient made a good recovery, the circulation soon being re-established though there was some sloughing of the foot and sensation, and motion did not fully reappear until five or six months later.

Diphtheritic Secondary Sore of the Lip with Involvement of the Throat.

Jno. R. Rose, in the Georgia Journal of Medicine and Surgery for February, reports an interesting case.

He was called to see a case supposed to be suffering with cold, and on examination he found the submaxillary glands swollen and tender, throat inflamed, deglutition difficult and painful. But the most remarkable symptom was presented by the lower lip. It was edematous and protruded about one inch beyond the upper lip, having near the center and about half an inch from the border a small, whitish round sore about one-eighth of an inch in diameter.

Patient stated that the lip had been chap-

ped the week before, but had healed over before the present sore made its appearance.

She was the wife and assistant of the postmaster, and was in the habit of moistening her thumb with her lower lip in distributing mail.

There was no increase of temperature or pulse rate. The condition grew worse even with active local treatment, the pulse became weak and thready, and the upper lip became infected, and later the throat, when the systemic effects of the poison became alarming.

On the afternoon of the third day 2,000 units of antitoxin were given and the patient was some better the next morning, and the recovery was rapid, and in two weeks she was able to be up and about.

The writer ascribes the patient's recovery to the timely use of the serum.

The Cause and Prevention of Infant Mortality.

Ernst Wende, Health Commissioner of Buffalo concludes his report on this subject in Pediatrics for March 1st.

He says that the milk industry should be under both state and municipal control and suggests the following features.

The license system, the fee, periodic systematic inspections with revoking power and penalties for dereliction.

The inspection system should include inspection of herds (tuberculin tests), food, animal care.

Demanding* sanitary environment and buildings, correcting existing evils, and examination and approval of plans, pending erection of new ones, which should comply with a standard of sanitary construction, with especial reference to specific requirements of the business, viz.: separate milking and stabling quarters, proper cubic air-space, non-absorbent material.

Scrutiny of water supply, standard feeding, health of employees, hygienic care of utensils and cans, cleanliness and protection in milking.

Definite rules governing all procedures, particularly as to the cooling process, preparation for the market, and the relation to the varying seasons.

The differentiation of the various characters of milk by differently colored or shaped cans, which are properly labeled with date of milking and time of shipment.

Prohibition of milk preservatives and coloring agents; of alteration and of the marketing of milk from diseased, sick, or

parturient cows; of the use of disinfectants, their necessity implying bad sanitation.

The prohibition particularly of refuse or swill food upon any dairy premises; of any food by reason of decomposition or fermentation considered unhealthful, and of the association of other domesticated or housing animals with cows.

A standard of quality, with periodic testing and analysis.

Veterinary inspection with distinction and compensation therein, and quarantine against the introduction of tuberculous cattle from without the State. It should be as rigid as against pestilence in man, and it is only by this means that the malady can be circumscribed and its bearing on human life favorably influenced.

With this standard of supervision by the State, the municipality should continue the supervision upon the same lines, which are outlined as follows.

1. Continuation of the license system with penalties, together with stringent ordinances covering quality, adulteration, sanitary care, and relation to contagious disease contamination.

2. Milk should comply with the State standard as determined by lactometer tests, periodically instituted, both in milk houses and on wagons.

3. Sanitary non-absorbent milk-rooms of determined size, air-space, ventilation, and light; with specifically constructed, indirect-plumbed cooling and storage boxes not communicating with sleeping rooms, privies, stables, or other influencing rooms.

4. Wagons properly lettered and numbered, with protection from summer heat.

5. Stringent prohibition regarding intercourse with houses containing contagious diseases, particularly relating to the exchange of milk bottles and the prohibition of refilling milk jars *en route*. The constant surveillance of contagious disease in relation to milk routes by means of "telltale register."

6. Obligatory cleansing of milk utensils by a uniform method, and of cans before returning to the dairy.

7. Special supervision of and discouragement, if not abolishment of the sale of milk in groceries and similar stores where the business is subordinate to other interests and consequently lacks protective facilities.

United States and City act in unison in this, where interests are identical, the adoption of arbitrary interdiction or destruction at the city line of all milk coming from unsatisfactory dairies.

Systematic reports, and mutual warnings and notification of imperiling conditions.

Idiopathic Hematuria.

Two cases of idiopathic hematuria are reported by T. J. Elterich, in the Archives of Pediatrics for March.

The first was in a male child 8 years old, had never had any malarial symptoms, blood first appeared in the urine three years before from no apparent cause and had continued at intervals ever since. The mother stated that the appearance of the blood was paroxysmal and was apt to occur after some mental excitement as punishment or scolding. The liver and spleen were normal and there was no sign of tumor in the region of the kidney. The patient is not very weak, is not sick and complains of nothing.

The second case was in a male child age 5. The hematuria of ten weeks duration and it was absolutely the only symptom. Sometimes the urine is perfectly clear, at other times it contains a considerable quantity of blood.

Bacteriologic examination was negative.

White blood corpuscles 5250, red 2493-Soo or 1 to 475.

In the treatment rest in bed is emphasized as an essential and important measure.

The mineral and vegetable astringents may be tried.

Calcium Chlorid as an Hemostatic.

A case of hemoptysis is reported by J. Lee Hagadorn, in the Southern California Practitioner for February, in which he gave two grains of calcium chlorid every two hours with the very best results.

He gave it in the form of a ten per cent. solution and the effect was at once noticeable, the hemoptysis ceasing altogether in a few hours and never returning.

The patient had been injured by two men jumping on his chest in a fight.

The author also used it in two cases of excessive flowing at the menopause with very prompt and gratifying effect.

He thinks it promises to supply the much longed-for clotting agent in hemophilia as it has already removed from this alarming condition much of its danger.

Aseptic Gangrene.

The word gangrene suggests anything else but aseptic processes, says C. B. Parker, in the Cleveland Medical Gazette for February, but such a thing is possible in certain cases. He discusses the gangrene produced by the surgeon's cautery as well as those occurring in open, contused and lacerated wounds, compound fractures, severe inflammations, and all injuries in which there is a probability of some portion of the

injured tissue becoming dead. The treatment is to prevent the entrance of germs or their products and to destroy and remove them when present. In regard to the cautery we should render the parts aseptic and afterwards protect the cauterized part with an ample aseptic dressing. In regard to injuries, we should first endeavor to thoroughly cleanse the wound with soap and water and a hand brush, giving an anesthetic if necessary.

Stitches should be avoided if they at all interfere with free drainage, a moist bichloride dressing not stronger than 1-4000 covered by a protective is placed next the wound, poultices are not allowable, dry heat as by hot water bottle is indicated, pressure with position and rest completes the outline.

Fracture of the Base of the Skull.

A case of fracture of the base of the skull with recovery is reported by Newell C. Bullard in the New England Medical Monthly for March.

The case was a male, aged 21, who had a fall from a bicycle causing the fracture.

The right ear bled freely until the next morning when the discharge changed to a serous fluid (cerebro-spinal fluid) and continued to run freely for three days.

Within ten days he was able to sit up, though troubled with dizziness, hearing was absent for two weeks and then gradually returned. Total loss of smell is the only remaining mark of the injury.

The doctor does not tell of any measures used to prevent infection.

The only treatment mentioned is stimulants and morphia.

Alcoholic Cirrhosis of the Liver.

The occurrence of alcoholic cirrhosis in the very young is doubted by some, but R. Abrahams, in Pediatrics for March 1st, reports a well marked case in a girl baby only 16 months old.

The child from early infancy had taken a glass of lager beer every day, with the hope, on the part of the parents, of improving the baby's nutrition and development.

After tapping the case improved with salts, acetate of potash and infusion of digitalis.

The liver is smaller than it was six weeks ago, but the author is undecided whether it is becoming atrophic or gradually returning to its previous size.

Digitalis and its Aids in Chronic Cardiac Diseases.

When the evidence of failing power exists, showing the inability of the heart to meet the demands upon it, digitalis is doubtless our chief remedial agent, says J. B. McGee, in the *Cleveland Journal of Medicine* for February.

As the drug is slowly eliminated, doses at long intervals are sufficient to maintain its effects when once produced.

Among the aids to this drug he mentions rest, strophanthus, caffein, theobromin, diuretin, strychnine, nitroglycerine, mercury and apocynum or black indian hemp.

Strophanthus he considers second to digitalis in therapeutic worth and in certain valvular disorders with bradycardia he prefers strychnine to either.

Nitroglycerine, opiates and the iodides are valuable when we desire to lower tension.

Calomel in one grain doses three times daily excels as a diuretic and the benefit is usually marked not only from the diuresis, but by the stimulation of secretory activity and lessening hepatic congestion so universally present in chronic cardiac diseases.

Plasterparis Splints.

The Schœnborn-Beele splint is described by Edward H. Lee in the *Chicago Clinic* for February.

It is made with plasterparis and strands of hemp such as are used in making rope. The water and plaster are mixed slowly with plenty of stirring until about equal parts have been used or until a somewhat mushy substance has been used.

A bundle of the hemp fibers, parallel and of equal length, is dipped in the plaster and drawn through the fingers to take off the excess of plaster and then laid on the limb or part to be secured.

This repeated, layer on layer, until a sufficient stiff splint is formed, which is parallel to the longitudinal axis of the limb. If suspension is required as many rings as may be necessary are worked into the splint as it is being built.

Extention may be applied by adhesive strips or glue dressing.

The kind of splint will vary according to the seat of fracture of course.

The width of the splint should be about one-third the circumference of the limb and is secured after hardening by roller bandage.

The author instead of using hemp uses simply the roller plasterparis bandage which after wetting is carried up and down the

limb until the requisite strength and thickness are secured.

The interrupted splint for resection or compound fracture may be readily made as for simple fractures.

Among the many advantages which the splint offers are: That it can be applied immediately; is light and neat, there is no necessity of padding with cotton; it is not apt to produce decubitus; it may be removed and put back in place in a very short time, and the cost of the material is but very little. No other splint will adapt itself so perfectly to the form of the limb as this one.

Practical Abdominal Surgery.

A. C. Bernays, in the *Railway Surgeon* for February 6th, gives some very practical points in regard to abdominal surgery in the hands of the general practitioner.

He notices the fact that the modern tendency is to treat all such cases in hospitals so that less and less of the cases are being treated surgically by the country doctor.

This is doubtless best in many cases, but some surgical cases will not stand the transportation to a distant city and some are emergency cases which demand prompt interference.

The country air is freer of bacteria than many of our hospitals and in that one respect is favorable to surgical work. A new house is also a good place in which to operate.

The diagnosis is difficult and oftentimes can only be guessed at until the abdomen is opened, but this fact should not scare the country doctor.

Operating by a text-book is bad and there is nothing like assisting a competent surgeon for awhile as preliminary to abdominal work.

Don't give opium or any of its preparations for abdominal pain with fever. He says the ordinary mortality rate must be multiplied by six in "opiated cases."

So many patients would do, better if opium was taken out of the hands of the practitioner in such cases and castor oil and salts put in its place.

Drain thoroughly all suppurative cases with gauze alone or with tube and gauze, but never with tube alone. Use no catgut, all silk.

Close the abdomen by the through and through stitch.

Plenty of soap and water is the best way to avoid infection.

Cases of obstruction with distention of the intestines by gas and putrid, liquid feces are very dangerous, but may be treated

by making two enterostomies, one at right iliac fossa in the cecum, the other in the left iliac fossa in any distended loop of small intestines presenting and the gut fastened to the abdominal wall.

The canal in the gut is then washed out but not the wound.

Pus cavities that are properly drained need no irrigation.

He recommends that each town and village support an operating room, and a few sick rooms, for emergency cases. Such a place could be used by all the local physicians, or by a consulting surgeon who might be called in. On the other hand the great complications and refinements of modern surgery are not always attainable, and they are not always necessary. It is time to insist that simple means will achieve good results, and that aseptic work can be done in private houses and on farms with satisfactory results.

The Treatment of Chronic Morphinism.

The sanitarium treatment of the morphine habit is described by Dudley Fulton, in *Modern Medicine* for January.

The patient is given a preparatory treatment lasting from two to four days and the withdrawal of the drug is then begun by reducing one-third or one-half the amount taken the preceding day. With the average patient it is useless to delay the entire withdrawal longer than the fourth day, as the suffering is only prolonged.

The patient is fed on liquid foods, malted nuts and kumyss and given sedative baths at the temperature of the body. Galvanism, faradism, massage, fomentations, etc., are all used and something is done every moment to lessen the pangs of the drug hunger.

Coto bark and bismuth are used for any intestinal symptoms.

The neutral bath is used for insomnia and the patient is allowed to sleep from sheer exhaustion.

Five cases are reported treated by this method with complete recovery.

The Treatment of Appendicitis.

A treatment that will give only a mortality of one per cent. in this disease is outlined by Thomas Parker, in the *Medical Sentinel* for February.

The principle is rest to bowel not by the administration of opiates but by rectal feeding.

Laxatives are admissible when the patient is first seen, in one dose and no more.

For the pain he uses an ice bag or dry

heat, turpentine stupes and belladonna suppositories.

The dorsal decubitus is strictly enforced and he says if the appendix should rupture no harm will be done, as the general cavity is protected by lymph.

He thinks that most cases under this treatment will become appendicitis obliterans.

He quotes Fenger's advice to operate after the second attack, but as the patient may not live through two attacks the operation may not be needed.

Painful Ulcer and Tissue of the Rectum.

This condition is very often overlooked by the general practitioner and the patient treated for internal piles or something else, says Livius Lankford in the *Richmond Journal of Practice* for February.

Though a simple matter, it may rapidly destroy the patient's strength and undermine his general health.

He recommends a free incision through the base of the ulcer, but not through more than one-third of the external sphincter. Local anesthesia under cocaine is sufficient.

When the base of the ulcer is gray and hard it should be removed with a sharp curet, before cutting. If the ulcer involves the internal sphincter, then cut through the internal sphincter into the cellular tissue and always make your incision at right angle to the direction of the muscular fibers.

Confine the patient to bed until the wound is healed and be sure and cure him the first time. He assures us that a man whose sphincter has been cut without a cure will never forgive us and there will be no opportunity for a second operation.

The Treatment of Stuttering.

The treatment of this condition involves five principles, according to R. Coen, of Vienna, in the *Laryngoscope* for February.

The first consists of breathing gymnastics, the principal movements being the deep continued inspiration, the short inspiratory movement of the breath, the gradual prolonged expiration and the holding of the breath.

The second principle is used by enumerating slowly the vowels and diphthongs then gradually increasing the intensity and rapidity of their vocalization.

The third principle includes the secondary cause of stuttering and the treatment will vary in individual cases, but in all we endeavor to eliminate the spasmodic periods, diminish the excitability of the nervous sys-

tem and increase the activity of the muscles of speech.

The fourth principle concerns the will power of the patient, and it is here that the skill of the medical instructor is of greatest value. The fifth and last principle involves the stimulation and toning up of the general system by tonics, sedatives, stimulants and best of all hydrotherapy, massage, and frequent and regular fresh air exercises.

These principles of therapeutics for the relief of stuttering are the result of an experience of twenty-five years in the treatment of speech defects; energy and persistency in their application are the secrets of success, for we deal with a class of cases which frequently call into question every resource of the physician, to which should be added an acquired high degree of patience and determination in the practical treatment.

Malarial Hematuria.

This disease was described and rightly classified by Hippocrates 480 B. C.

Malarial toxæmia of long standing is the cause, says Bat Smith, in the New York Medical Journal for February 3rd. The poison is specific, as there is no other known agent capable of producing the same morbid phenomena.

On autopsy we find a yellow or bronze color of the skin, the muscles dark reddish, rigor mortis strongly marked, the heart is firm and natural except as to color which is dark, purplish red.

In a few cases congestion of the lungs was found, but in the majority they were healthy.

The stomach is usually congested and its mucous membrane discolored by bile.

The liver is enlarged and a deep slate color.

The conditions of the kidneys were most important. Externally they were a dark bluish color with here and there black spots.

Extreme congestion of the whole organ, in fact an active inflammation. The tubules were desquamated and almost entirely denuded of their pavement epithelium.

The brain is very much congested with considerable effusion and urea was found in large amounts throughout the substance. The spleen is very much enlarged and in one case it was ruptured.

The blood is thin and watery, the red corpuscles being greatly diminished in number and contain pigment granules.

The disease is usually ushered in with a chill, slowly or rapidly developing, which is severe.

Vomiting sets in, the pulse is hard and

frequent at this stage, the germs are usually a bluish leaden hue.

The chill lasts about an hour and the hot stage comes on gradually.

The skin now assumes a golden yellow color which deepens as the disease advances. The headache is increased.

In all cases seen by the author the hemorrhage came on during the cold stage or immediately after. The urine contains much kidney debris, blood coloring matter and corpuscles, its specific gravity is low 1013 to 1017, acid reaction.

The pulse is slow compared with the temperature. Death may occur by collapse or suppression of the urine or coma.

Forcible Correction of Spinal Curvature.

Calot and Redard deserve the credit of reviving this operation, writes Frank Greenwell, in the Fort Wayne Medical Journal-Magazine for November.

He thinks it better to apply the correcting force by means of the hands according to the method of Calot rather than by leverage as practised by Redard.

As in all surgical procedures there is some danger. Paralysis, shock, activity of latent abscess, or inflammatory action may occur after treatment.

The most promising and safest for operation are those cases in which the deformity is in the lower dorsal and lumbar region.

After the age of 20 a very firm ankylosis should be let alone unless paraplegia exists.

The operation will stay with surgery, but will be found applicable to a much smaller per cent. of cases than Calot at first thought and after all the deformity is only corrected so far as the erect position is concerned.

Stone in the Bladder.

In discussing the treatment of stone in the bladder, C. B. Parker, in the Bulletin of the Cleveland General Hospital for October, says that the only successful treatment is the surgical.

Litholapaxy he thinks advisable when the stone is small and soft, the urethra patent to the passage of sufficiently large instrument and the bladder capable of holding at least two ounces of water.

Thus the operation is more suitable in middle and later life.

In lithotomy the lateral incision is recommended for the perfect drainage which it gives to the bladder, as there is nearly always cystitis. And in children it is difficult to secure the necessary treatment demanded by the suprapubic wound.

He admits, however, that in some cases

the suprapubic is not only the best, but the only method by which the stones can be certainly and successfully removed.

In a case reported the suprapubic operation was done as the urethra was strictured, the prostate greatly enlarged and the stone was very large.

Physical Diagnosis.

A plea for greater care in physical diagnosis is made by William Porter, in the North American Journal of Diagnosis and Practice for February.

The matter is taken up in a logical way and he insists first, that the chest should be bared for inspection and that this inspection should never be neglected. Mensuration is also important and for this purpose he recommends the calipers as far preferable to the tape, remembering always the value of comparing the two sides. This comparison is also of great value in percussion and auscultation.

Always examine the posterior chest wall and be familiar with the use of the stethoscope.

Among the important early signs discovered by a careful physical examination he mentions the prolonged respiratory murmur indicative of incipient tuberculosis of the apex.

Another sign of importance is conveyed heart sounds. The relation of heart impulse to pulse tension deserves careful study.

The changes from the normal that are the easiest overlooked are often the most important, because they are the earliest signs of disease.

Strangulated Hernia.

Some points in the diagnosis and treatment are discussed by W. B. DeGarmo, in the Post-Graduate for February.

The history is more or less important, local pain is not a safe guide, the characteristic pain is usually across the abdomen just below the navel and is intermittent. Extreme pain means that action prompt and radical is essential in order to save life.

Temperature and pulse are not safe guides.

An irreducible tumor, hard, sensitive to pressure and perhaps hot, general abdominal distress, vomiting and intestinal obstruction means strangulation.

In the treatment, medicine means delay and delay means death. Cold and opium may be used preparatory to operation.

Taxis may be resorted to, but without an anesthetic, as the insensibility of the patient is a dangerous point.

The real treatment is radical and includes a surgical operation.

The location of the incision he considers important, in inguinal hernia from a little below the external ring to little above the internal, in femoral hernia the incision is made directly over the center of the tumor.

In opening the sack great care is necessary, as the intestine may be adherent to its inner surface.

If the bowel is destroyed resection or artificial anus is indicated, the latter being safer for the patient.

The Determination of Sex at Will.

A new theory is advanced in regard to this subject by J. Griffith Davis, in the New York Medical Journal for February 24. She holds that the sex depends upon the time of conception, if it occurs ten days or longer after menstruation the child will be a boy, if from three days before to eight days after menstruation the child will be a girl. The ninth day after menstruation is the neutral period when either boys or girls may result. She states a woman does not conceive from fifteen days after the cessation of the menses till three days before an expected period.

She relates several cases to support her contention and regards the idea a thoroughly practical one. The only condition is the practice of absolute continence for a certain number of days. If a male child is desired then no intercourse from three days before the appearance of menstruation to ten days after, if a girl is the desired addition to the family, then self-denial from the eighth day after to the third day before the expected period.

Sterility and Pelvic Deformity.

In cases of sterility we should make a careful pelvimetric examination of the pelvis before instituting means to render conception possible, according to J. B. Cooke, in the Medical and Surgical Monitor for February. Sterility is a symptom only and it may be indicative of conditions rendering pregnancy and labor not only undesirable, but actually dangerous to the patient's life and it should be so regarded until the contrary has been positively shown.

He reports an instructive case where the uterus was small and anteflexed with profuse leucorrhea. The cervical canal was dilated and curetted and the parts treated with ichthyol and glycerine tampons for about ten weeks.

Conception occurred within two months after the discontinuance of the treatment.

At the beginning of the fourth month of

pregnancy the pelvis was measured and found too small to allow the child at full time to be delivered, so labor was induced at the 23d week. An attempt was made to save the child in an incubator, but it died five hours after birth.

The pelvic measurements showed the external conjugate 4 c.m. below the average, the anterior superior spine 2 c.m., the iliac crests $3\frac{1}{2}$, the intertrochanteric 3 and the posterior superior spine 2.8 c.m. less than the normal

Fractures in Infancy.

Two cases of fracture in young children are reported by T. Halsted Myers, in *Pediatrics* for February 15th. One was fracture of the neck of the femur in a child $6\frac{1}{2}$ months old which came to autopsy and examination revealed the break $\frac{1}{8}$ of an inch below the epiphyseal line with displacement of the lower fragment directly inward. The periosteum was stripped off for $\frac{3}{4}$ of an inch and a large amount of callus had been formed both inside and outside the periosteum.

The fracture was perhaps a month old, no history being obtainable as to the nature of the accident or when it occurred.

The second case was one of fracture of the left humerus in the middle of the shaft and a transverse fracture of the tibia and fibula which latter simulated anterior curvature of syphilitic origin and it was only by means of the X-ray that the break was found with moderate callus formation, but no malposition.

The little patient was 18 months of age.

Secondary Hemorrhage Associated with Serious Fracture or Amputation.

Three methods for the control of secondary hemorrhage in such conditions are discussed by Thos. H. Manley, in the *Virginia Medical Semi-Monthly* for February 9th.

First, immediate compressions over the seat of leakage; second, ligation of the bleeding vessels in the wound; third, the actual cautery.

The first method is both suitable and valuable in superficial oozing or venous leakage.

In free bleeding from arteries ligation is better and safer, though if the artery be deficient in vitality the ligature may quickly cut through and will have hemorrhage as free as ever.

Compression and the ligature being ineffectual, we turn to the potential cautery

which he considers the most powerful and prompt hemostatic known.

With the modern thermo-cautery of Paquelin or the galvano-cautery, we have at our command an agent which may be safely relied on when the seat of hemorrhage can be accurately determined and reached.

However, the use of such a powerful agent requires caution to avoid excessive damage to healthy parts.

Hot water he does not think much of in amputations, at best, it is only a fluid cautery and acts by parboiling and coagulating not only the corpuscles in the blood, but all the albuminous elements in the adjacent tissues as well.

Transfusion may be employed, but he doubts the efficacy of saline solutions.

The patient should be in a prone position, at perfect rest, cool drinks freely and alcoholic stimulation.

Rigidity of Maternal Soft Parts During Labor.

There may be three varieties of rigid os uteri, according to J. J. Mulheron, in the *Physician and Surgeon* for January, the *anatomical* due to hypertrophy of the transverse fibres of the cervix, the *pathological* due to cicatrices, cystic or fibroid growths or malignant deposits or it may be caused by sexual abuse or by methods employed to prevent the legitimate results of sexual congress and the *spasmodic* which is probably the most frequent.

In the case of anatomical rigidity a masterly inactivity on the part of the accoucher is all that is required.

In the treatment of the pathological variety the means employed must vary with the cause of the condition, but when interference becomes necessary the only remedy is the knife.

In the spasmodic form active interference is imperative as laceration of the cervix is the very common sequel of this complication.

The first thing to be done is to restore the uterus to its proper axis by bimanual manipulation—one finger hooked in the os and applying counterpressure with the other hand over the fundus.

Morphine and atropine hypodermically to relieve spasm and quiet the nervous system.

All psychic excitement should be avoided as far as possible.

In obstinate cases he recommends 20 grains of chloral hydrate in a pint of warm water by the rectum as better than chloroform.

In rigidity of the perineum when it is evident that the parts are about to give way he advises episiotomy thus substituting for an irregular tear a clean cut incision where it can do no harm. The incision should be made with a blunt pointed bistomy introduced on the flat with the index finger as a guide, the cut being made from within outwards.

The edges of this incision will show a tendency to approximate each other instead of gaping as in a tear and a few interrupted sutures will hold them snugly in place.

The practicability of episiotomy is so manifest that he considers spontaneous rupture of the perineum to be absolutely inexcusable.

General Exploration of the Abdomen Opened for an Operation.

A routine examination of the abdominal contents has been recommended in all cases requiring abdominal section, but John Homans, in the Boston Medical and Surgical Journal for February 23, advises it only when it is not necessary to enlarge the incision to do so.

If the incision has been made only an inch and a half long for an appendectomy or for the removal of ovarian tumor or for an easy cholecystomy he would not lengthen it. But if for any reason we have made an opening large enough to get the hand in he thinks it a good plan to always explore the cavity, especially the region of the gall bladder and appendix.

This is especially wise if we have any unexplained symptoms of pain and discomfort.

He reports three cases operated on for disease of the pelvic organs and the kidney in which further exploration showed the presence of gall stones which were removed at the time of the primary operation.

He concludes that exploration in certain cases is not only justifiable, but that probable conditions should compel us to make such examinations.

Varicella.

A clinical lecture on a case of chicken pox, by John V. Shøemaker, is reported in the Medical Bulletin for February.

The patient was a boy ten years of age and presented a rash upon his breast and forearms which had been present four days. Small scabs were scattered about upon various parts of the body caused by the bursting of the vesicles from scratching.

Temperature was 100.3-5 and some fever had lasted for the past four days.

In the diagnosis attention was called to the fact that varicello occurs before the tenth year of life, that the rash appears as small rose-colored spots becoming vesicular in 24 hours and then dry up at the end of three or four days. All the vesicles are developed by the second day and commence to desiccate on the third day. The whole course of the disease is about a week.

The incubation period is from eight to eighteen days and the rash appears first on the chest or abdomen.

The treatment is simple, saline laxative, tincture of aconite or gelsemium and locally the following prescription:

R Hydrarg. chlor. corros., gr. i
Chloral. hydrat., gr. xx
aq. ros.
aq. destillat., á. á., 3ii

Sig—For external use.

Tonsillitis.

Fifty per cent. of all the recoveries from diphtheria before the advent of antitoxin were cases of follicular tonsillitis, says G. H. Thraillkill, in the Western Medical Journal for February. He further states that 20 per cent. of all deaths from so-called diphtheria were the result of some of the grave forms of tonsillitis or their sequela.

He recognized three clinical varieties, acute catarrhal, follicular, and porenchymatous or quinsy.

He recommends ammoiated tincture of guaiac in dram doses, nitrate of silver 12 grains in an ounce of alcohol as a local application.

Scarification is good when the tonsils are much swollen and abscess does not form or is very slow in forming.

Of course, after abscess formation we must open at once and clean out the cavity.

He believes in a form of the disease which may be called pseudodiphtheria, diphtheretic tonsillitis or diphtheroid sore throat, but does not enter any discussion in regard to it.

Ossification of the Uterus.

A case not of simple calcification, but of true osteoma of the uterus, is reported by C. Jeff Miller, in the New York Medical Journal for March 3rd.

The patient was a girl 16½ years old, of robust appearance and unusual development for her age, consulted a physician for pain in the hypogastric region and delay of the menstrual appearance.

After careful examination a laparotomy

was done and a large mass found occupying the site of the uterus which was removed, no ovaries could be found.

In the mass was found an ascous tumor enveloped in thin tough fibrous capsule, $2\frac{3}{4}$ inches in length, $2\frac{1}{2}$ in width, $1\frac{1}{2}$ thick.

On further examination this was found to be composed throughout of compact bone structure presenting all the histological elements and arrangement of normal bone.

The point of special interest in regard to the tumor is its origin and the tissues possibly involved. Whether it is simply a growth resulting from matamorphosis of connective tissue or some organ or displacement of osteogenetic matrices has not been positively determined. The vagina was entirely absent and the ovarian and Fallopian-tube structure not recognizable without the aid of the microscope. Whether the uterus alone developed and underwent these changes is difficult to decide, but the position of the growth, its dimensions, and exact resemblance to that organ gives every reason to believe it to be ossification of the uterus.

Typhoid Fever Complicated by Cancrum Oris.

A case of typhoid fever in a boy four years of age complicated by cancrum oris is reported by Barksdale in the Richmond Journal of Practice for January.

About the tenth day of illness a phlegmonous swelling was noticed on the left cheek later a spot on the right cheek went through the same process.

The slough was removed and the wound touched with nitric acid. The swelling then subsided but the fever continued from 101 to 104 while the pulse and respiration rapidly increased despite active stimulation and supportive treatment. The patient died on the 25 day from exhaustion.

Fracture of the Patella.

The operative treatment of this condition is discussed by Charles Greene Cumston, in Medicine for March.

The incision should be made so as to give plenty of space, especially if the fracture is old, the flap should be well supplied with blood at its base and the latter should be broad in proportion to its height and the cutaneous incision should be as far away as possible from the cicatrix in the bone.

For recent fractures he recommends subcutaneous wiring which must be aseptically done.

In old cases the open method is the best. When one of the fragments is very small, the

wire should be passed through the ligament of the patella or the tendon of the triceps.

When the fracture is of long standing and the fragments separated by a certain amount of fibrous tissue, the latter should be freely excised, the border of the bone freshened and then held in opposition by the wire sutures.

As the operation involves a serous cavity we should be just as careful in regard to asepsis as if operating within the plura or peritoneum.

Laryngo-Hyoidectomy for Carcinoma.

Jacob Frank, in Medicine for March reports a case in a man age 39.

In removing the larynx and separating the trachea from the esophagus, it was necessary to remove a small portion of the esophagus at its upper end on account of involvement. The epiglottis and hyoid bone being implicated in the disease process they were also removed, together with portions of the thyroid glands.

The edges of the divided trachea were sutured to the lower angle of the wound.

Rectal feeding was used for the first few days and then nourishment was taken through the stomach tube.

On the 17th and 20th days several small glands were taken from the sides of the neck which showed carcinomatous growth upon microscopic examination.

Nearly three months after the operation the patient was able to take solids and liquids by the mouth, but owing to the esophageal fistula, a piece of gauze had to be held against the opening. His speech is intelligible, but is a hoarse monotone.

Diagnosis and Treatment of the Elbow.

In making a diagnosis we should always compare the injured elbow with the opposite side, says Duncan Eve, in the Southern Practitioner for March.

In fractures just above the condyles it is necessary to exclude dislocation of the ulna and radius backward.

The great swelling that quickly follows the injury often prevents a satisfactory examination.

When this supracondyloid fracture is combined with intracondyloid running into the joints, the fragments may or may not remain united.

He advises treatment with a rightangled splint.

In the condyloid fractures very slight flexion answers as well as the right-angled position.

Obscure or severe fractures should de-

mand exploratory incision for replacement of fragments and he thinks such incisions are not employed as often as they should be.

Irrigation in Acute Gonorrhea.

The Valentine apparatus is recommended by George M. Coon in Gaillard's Medical Journal for March.

He first uses 1 to 20,000 of bichloride for two days if the discharge is still muco-purulent and the mucous membrane but slightly inflamed.

When the case has passed to the stage of pus discharge he then uses 1 to 6000 permanganate of potash, which should be as hot as the patient can stand it and not less than one quart at each treatment. The strength of the solution is increased each day until for anterior irrigation 1 to 1000 causes neither pain nor irritation.

Intra-vesical treatment should be always preceded by thorough flushing of the anterior urethra, and they should be made late in the day, as there is commonly some irritation and a frequent desire to micturate, so the treatment should be given after business hours.

If the meatus is small it should be enlarged so as to take an 18 American sound.

Lipoma of the Foot.

A case of this rare tumor of the foot is reported by F. Jeanbrau, in Nouveau Montpellier Medical for January 7th, which occurred in the surgical clinic of M. Forgue.

The patient was a boy 11 years of age with a negative personal and family history. The tumor was on the right foot immediately over the metatarsal bones of the first and second toes and was about the size of a large orange.

The growth first made its appearance when the child was six years old. It was removed under chloroform anesthesia and involved the periosteum of the metatarsal bones. The cavity was packed with iodoform gauze and the boy made a good recovery. On examination the tumor was found to be a pure lipoma with here and there fibrous tissue predominating.

The author concludes that the case was one of lipoma of the foot of congenital origin.

Rheumatic Gout.

This disease might be called painless rheumatism but for the rare exception that occasionally people with it do suffer pain, says B. C. Loveland, in the New York Medical Journal for March 3rd.

The characteristic changes and luxations in the bands are well shown by illustration.

The treatment suggested is dietary, hygienic and hydrotherapeutic and medicinal.

An average diet will allow meats of the lighter kinds, such as lamb, mutton, white meat of poultry or fish, once a day. Breadstuffs should be of entire wheaten flour. Green vegetables are valuable and should be used freely. Not less than 2½ quarts of water should be drunk in every 24 hours.

Exercise in the open air, massage and electricity, Swedish movements, packing, sweating or counter irritation about the joints, cool tonic baths freely hot baths with caution. The Turkish bath with large amount of rubbing is valuable.

The medicines most useful are solicylate of sodium and iodide of potassium.

The Leading Editorials of the Month.

Carrier Pigeons and the Country Practitioner.

We are living in a very progressive age and all the progress is not by any means in town, and even the country is being harnessed in with a net of wires.

The perfection and cheapness of the long distance telephone and its consequent installation in many country neighborhoods have done much to lessen the anxiety, if not the labor, of the country doctor, says Pediatrics.

As the greater part of our country, however, is as yet unprovided with telephone service, a practical suggestion in regard to the use of carrier-pigeons which we find in the recent number of the Gazette des Hôpitaux may prove of value to some of our readers. The writer, after having trained a number of pigeons, leaves one or two at the house of his patient to be dispatched with a message should an emergency arise, or to state the morning and evening condition in a critical case. This means of communication gives the patient a sense of security and often serves to lessen the labors of the physician. So well satisfied is the doctor with this that he has established a station in each of the villages in his neighborhood so that he may be promptly summoned for new cases. He finds that he can leave two pigeons, always of the same sex, in a post for about a week. The longer the birds have been absent, the more quickly do they return.

After having been away for a week, they are allowed a week's sojourn at home. The pigeon house has an opening for the entrance of the home-coming birds arranged

like the entrance to a mouse-trap. The arrival of a bird in its cote is made known by an electric connection which rings a bell in the doctor's hall. The birds if gotten young are easily trained. They will not fly at night. "This latter peculiarity," the doctor naively remarks, "has its advantages, for the farmer, ordinarily, is prone to wait until the day's work is done before going for the doctor." When he knows that pigeons are at his disposal and that they will not fly at night, he comes by and by to change his habits in this regard. Thus numerous midnight drives are rendered unnecessary for our overworked confrere.

Successful Filtration of Large Water Supplies.

This is of vital importance to the inhabitants of cities and in many places the problem is getting more and more serious each year.

According to the International Medical Magazine, at a recent meeting of the American Society of Civil Engineers, in New York City, Mr. Allen Hazen read a paper describing in detail the new filters erected at Albany, N. Y. Heretofore, there has been an excessive typhoid fever rate, and the Hudson River water showed other evidences of pollution by the sewage of the city itself, as well as by that of Troy, Schenectady, Utica, Rome, and other smaller towns above. As all other plans for getting a pure water-supply had failed, it was decided to employ slow sand filtration with an intake further up the river, a low lifting pumping station, a settling basin, a slow sand filter and a conduit to the present pumping station. The construction of the plant was started in April, 1898, and a part of it was in operation in July, 1899, and since September, 1899, all the water used in Albany has been filtered.

There are eight filters, with an area of seven-tenths acre each. With one filter daily out of use, while being cleaned, the other seven were supposed to yield 14,700,000 gallons daily, and this rated capacity has been reached with perfect ease, and on several occasions the filters have been operated to deliver one-third more. Exclusive of the real estate and engineering, the whole plant cost less than \$500,000. The cost of operation for 118 days showed an average of \$4.19 per 1,000,000 gallons delivered from the filters, which, as small as it seems when placed against the enormous hygienic advantage, is even much greater than in some continental cities, as, for instance, Rotterdam.

The scientific control of the filters is regarded as one of the essentials to the best

results, and a laboratory building has been provided between the filters and the sedimentation basin, supplied with facilities for bacterial examination, colors and turbidity of raw and filtered waters and chemical examinations.

During the four months of operation, the number of deaths from typhoid in Albany has decreased to seven against an average of twenty-four for the last nine years. Laboratory examination shows that the filters have reached a bacterial efficiency of over ninety-nine per cent., and that there is no doubt that there will be a practical elimination of local water-borne disease. The filtration also removes a part of the color and all the suspended matters and turbidity, so that the water is equally satisfactory in its physical properties.

The filtration in Albany has been methodically and scientifically conducted, and on a sufficiently large scale to test the efficacy of the process fully and to fix approximately the actual cost of construction and operation.

Filtration of large water-supplies is beyond the state of experiment, and it seems almost criminal folly for any prosperous community to be without a properly equipped plant. If the actual saving in useful lives, which has a monetary as well as sentimental aspect, could be accurately estimated, it would doubtless exceed in a very short time the necessary cost of installation.

Regulation of the Practice of Midwifery and Provision for the Licensing of Midwives in New York City.

The Medical Record says that an assembly bill has recently been introduced with the above object in view. The bill in question seems to present several objectionable features, and could be greatly improved by much judicious revision. Probably were a vote of the members of the medical profession throughout the State taken as to the necessity or desirability of licensing midwives, the consensus of opinion would be against such a course.

A very large number of physicians think that the licensing of midwives would be by no means a step in the right direction, but rather hold that a parturient woman is likely to receive more beneficial treatment at the hands of a skilled medical practitioner than if placed in the charge of a midwife. If, however, a bill of this description is to come into force, at any rate it will be well to have as satisfactory a one as is possible. The bill in its present form does not fulfil these conditions. Exception may be taken

to its first section, in which it is provided that the mayor of the city of New York shall appoint the examining-board. Surely such an appointment should be left to the discretion of the Medical Society of the County of New York. Another provision of the bill which will decidedly meet with the disapprobation of the medical profession is that a board of examiners should be appointed to serve without compensation. Physicians already perform more than their fair share of gratuitous work, and why they should be required to fill posts of this nature for "love and good-will" alone is a thing, in the words of the immortal Lord Dunsire, "no feller can understand."

Again, grave objections must be brought against that portion of the bill which provides for a board of examiners for New York City only. Physicians in all parts of the State should insist upon this clause being struck out or altered. The Medical Society of the State of New York has always strongly opposed bills to create examining-boards for midwives in separate cities and counties, and has insisted, and rightly so, that if midwives are to be licensed the practice should include the whole State. If this provision were allowed to become law, an extremely awkward precedent would be established: other cities in the State would probably follow suit, and would in the long run bring about a state of chaos.

There has been but little convincing testimony forth-coming that the midwives bill is called for. On the contrary, the mass of evidence tends to point in the opposite direction. Doubtless the services of a midwife who has under gone an examination testifying that she possesses a certain amount of experience and skill would be preferable to those of one who has been put to no such test. But, on the other hand, the fact must be plain to the veriest tyro that even a licensed midwife cannot be expected to grapple with all the complications which may occur, with the confidence of a qualified medical practitioner. In the end it will assuredly be found cheaper to employ skilled attendance, and when the public has grasped this truth the present class of ignorant midwives will in the natural course of things pass away.

The duty of medical journals is to bring the minds of the community at large to a realization of this fact.

Quackery, and a Suggestion.

The Atlanta Journal-Record of Medicine is very emphatic on this subject and says that it is not necessary to announce that

quackery is rampant in Georgia, and especially in Atlanta. The fact is sufficiently advertised in newspapers and may be read on the run. Atlanta has quite a reputation to sustain as a snug harbor for medical derelicts, and as the time and laws pass, she does not block her port.

But whose fault is it? Where does the blame lie? We have a State Board of Medical Examiners vested with plenary powers as regards the test of fitness by examination of applicants for license to practice medicine in the State. Its function is educational, not police. Back of the Board of Examiners is the buttress of the law, which is satisfactory enough in the observance, but more honored in the breach. We, have then, the means at hand for cleaning the State of the filth of charlatanism, or at least of preventing further deposits. Why do not we avail ourselves of these means ready at hand?

It is because the medical profession is a great, hulking, silent altruistic booby that must needs have some one come in when it has bemerged itself and change its diaper. It does not even know when it is dirty. It has neither pride nor self-respect nor the energy to look after its simplest most fundamental interests. It allows itself, prone, inert, an Ally Sloper grin on its blank face, to be stepped on and derided by every Weary Raggles of a medical hobo who has the price of a half-column newspaper ad. in his pocket. It giggles and says: "You behave," and acquiesces when it is chucked under the chin by any whorl of Babylon who wants to coax "testimonial" and "prominent physician" endorsements out of it. We are no more capable of self-government than are the Filipinos or the Haytians, or others who have to hire other people to do their thinking. It is useless for gentlemen of bulging foreheads to attempt to deny it. We cannot uproot the quacks by ourselves; that is, we are not disposed to exert ourselves to put the rusting machinery of the law into motion. We must employ some one to do it. What is everybody's business is nobody's. Therefore, let it be some one's especial function to search out and prosecute all violators of the medical practice act wherever they may be found in the State. To bring about this result and to remedy the disease of quackery, the State Medical Association should appoint in every city in Georgia of ten thousand or more inhabitants, a legal representative whose business is to see that the medical law be observed, and whose services shall be paid for by the State Medical Association in the event of the conviction of the offender. The surplus in the treas-

surv is usually between two and three hundred dollars, and is ample to cover this need. Could it be devoted to a better cause? Could it be expended to greater advantage than in clearing the State of quacks and upholding the law which cost so much time and labor to obtain?

A Milk Diet in Typhoid Fever.

According to Medicine the accepted diet for this disease is milk. As soon as the diagnosis is made, the majority of practitioners exclude everything but milk, and it is continued until the fever has disappeared. In this use of a milk diet in typhoid fever the traditions of the profession are faithfully followed. It is a treatment that was instituted soon after Louis differentiated typhoid from other forms of continued fever and showed the almost universal involvement of Peyer's patches. It would be impossible at this time to state who originated the strict milk diet, but the theory upon which it is based is certainly simple. The complications which are dreaded in this disease are ulceration with perforation and hemorrhage. It was thought that by excluding solid food from the diet the intestinal contents would be liquid and unirritating; consequently the danger of these complications would be reduced to a minimum.

A careful study of the statistics of typhoid fever shows but little change in the frequency of complications, no matter what diet or treatment is employed.

If we examine into the theoretical conditions which have urged an exclusive milk diet in the feeding of typhoid patients, we learn that it rests purely upon an *a priori* basis. It is assumed that a diet which is entirely liquid would cause less irritation of ulcerated surfaces in the intestines than one which contained some solid food. No one has ever experimentally shown that this is a fact, nor is it possible to prove by statistics that perforation and hemorrhage are less frequent in those patients who are kept on a strictly milk diet.

So far has this dogma of milk feeding in typhoid fever been accepted that many physicians recoil from the very thought of administering other foods; even eggs are excluded by many as belonging in the class of solid foods. In this unreasoning adherence to a milk diet we think many practitioners fail to recognize that milk, while taken in the mouth as a fluid, is soon converted into a solid in the stomach. Unless lime-water is added or the milk thoroughly diluted, or a mixture of milk and cream is employed, the proportion of casein is sufficient when

coagulated to form a mass in the stomach which from a physical standpoint is quiet as much solid food as is coagulated egg albumen or lean meat.

In the foregoing we are not urging that milk should not be given to typhoid patients as it is one of the best foods for sick people. It contains all the constituents necessary for the normal nutrition in about their proper proportions, and it is easily obtained in comparative purity. As a food for sick people it has many striking advantages, but we would take issue with a view that insists that typhoid fever patients must be fed on milk, and to an argument that would refer the complications, such as relapses and hemorrhage, to diet, in cases where the strict milk diet has not been adhered to. There are many patients who do not like milk and with whom it is not easily digested. Even those who take it readily and at first seem to enjoy it, as time passes acquire a dislike to it which in some patients amounts to positive loathing. In these, of course, some other food is necessary. They may be given eggs cooked in various ways, beef juice, and even beef itself. We think it a grave mistake to overfeed patients, on the general theory that the typhoid bacillus will feed upon the food which we give and not consume the patient. That the feeding of fevers and the so-called supportive treatment are devoid of the striking advantages claimed for them, is shown by the statistics of the Massachusetts General Hospital; in these the mortality is shown to have been practically the same in the days when purging, bleeding, and low diet were employed, as it is when the feeding and supportive treatment are used.

A curious series of experiments upon animals have been made, which have shown that feeding does not increase the vital resistance in fevers. Inoculated animals were found to survive a given infection with little or no food better than those fed liberally. A similar series of experiments as to the relation of fatigue showed that exercise in an infected animal very soon overcame its vital resistance and it succumbed early.

We have been told that it is dangerous to apply observations in animal experimentation to man, and in some instances this is undoubtedly true, but when dealing with the purely vegetative functions of life, those apprehended under digestion and nutrition, they are in the main safe. These experiments, applied to the treatment of typhoid fever patients, teach us to largely withhold food in the early period of the disease. Unless contraindicated, for the most part all food is better kept from the typhoid patient in the first five or six days of the di-

sease. Liquid should be given abundantly. One of the best of these is beef tea made in the old-fashioned way, by which the albuminous constituents of the beef are coagulated and only the salts extracted. This furnishes a pleasantly stimulating hot drink. The patient is convinced that he is taking a good deal of nourishment, whereas he is practically getting no food at all. Upon such a diet as this for the first few days the patient progresses better than upon milk or other food.

Local Medical Societies Here and There.

The scientific part of most any local society is hardly ever very attractive.

The Medical Age says that the verbal reports of cases, and extemporaneous discussions, of the average local medical society, caught on the point of the careworn secretary's stenographic pencil, and reduced to cold writing, do not make a conglomerate mass possessing any profound magnetic attraction, nor offer much solid pabulum for the mind of the searcher after truth. Indeed, it is only after the most skilful revamping on the secretary's part that such copy becomes just innocuously commonplace.

In searching for the cause which makes a local medical meeting poor or good, tedious or interesting, it is not necessary to take into consideration the professional qualifications of the men who chiefly take part in the meeting; for quite often the paper presented by a man of moderate learning, experience and general attainment calls forth as interesting a discussion as the disertation of his more learned *confrere*.

The local medical society is the primary from which delegates are sent to State and national societies, and to international congresses; to the young men it is a training school to fit them for participation in the proceedings of greater societies. It is here they must acquire clearness of thought and expression to enable them suitably to represent local affairs away from home. Deprived, too, of the stimulus of college life and teaching, they must seek here a certain inspiration and stimulus for their study and work. The vital importance of the local meeting to the general development of higher professional acquirements cannot be overestimated. The fact, then, that of the total membership of these societies such a pitiable small percentage makes up the average attendance should stimulate some sort of a change in the character of these meetings that would attract a larger number of men to attend and actively participate in the proceedings.

The lack of organized discussion often dulls the interest of the members in a well

written and well presented paper. Too often the discussion wanders bewilderingly from the subject in hand, and the next speaker discusses his predecessor's diversion till essayist and essay are vague and remote. Cases more or less irrelevant, cases of doubtful application to the subject in hand, are dragged in, and lucubrations are introduced that fatigue the mind and slow the listener's heart. A previously organized discussion, arranged for by the essayist and through his personal solicitation, would enliven the proceedings and give them greater pertinency.

Then, too, if medical men would sometimes wear a humbler mien and abase themselves by reporting doubtful diagnosis and results, the monotony of uniform success would be varied, and interesting and valuable counsel could be exchanged. The change could be attained without any loss of dignity or prestige. Aside from possible medical politics, a man's prestige is increased or decreased by his clientele, and in the local society of members of his own craft he could easily afford to forego any personal advertisement that would diminish the general interest.

The importation frequently of men of talent from neighboring cities is a feature that would excite a greater interest and attendance. Such exchanges of ideas are always productive of good results.

Local medical societies are of such great value to the active practitioner, are so vital to scientific growth and progress, that any changes promoting their attractiveness ought to receive hearty encouragement.

The Significance of Bovine Tuberculosis.

Some conclusions in regard to tuberculosis in cattle as causing the disease in man have been perhaps jumped at.

According to the Medical Record, to determine the matter in an adequate manner, Dr. Adami, of Montreal, says that the following three main questions have to be asked and answered: (1) Is tuberculosis in cattle a source of danger to other cattle so as seriously to affect their well-being and to be a source of loss to their owners?

(2) If infectious from animal to animal, is it infectious from animal to man, and thereby a grave source of danger to the human race? (3) If infectious from animal to man, what are the commonest modes of infection, and, as a sequel to this, how are we to diminish the danger?

The first question Dr. Adami answers with an unqualified affirmative, and gives a mass of statistics collected from different parts of the world in support of his conten-

tion. To the second and most important question, while accepting an affirmative as the correct answer, Dr. Adami points out that the amount of reliable evidence of direct transmission of tuberculosis from cattle to man is singularly slight. After drawing attention to the fact that experiments undertaken with the view of proving or disproving this theory have been attended with more or less negative results. Dr. Adami says we are forced, therefore, to fall back upon evidence of another type, and presents the case thus: "Do the bacilli gained from the human and bovine species possess a morphological and cultural identity? They do not. The bovine grow more freely in the ordinary glycerinated media; They are, I find, of greater relative breadth, while again pathogenetically they exhibit different degrees of virulence, and this when inoculated not only into cattle, but guinea-pigs and the small animals of the laboratory. . . . So far, however, bacilli having all the morphological and cultural characteristics of the bovine 'race' have not been isolated from the human organism, nor do I know that, so far, by placing protected human bacilli in the abdominal cavity of the cow these have assumed the bovine characters. It is in this last experiment, I believe, that the solution of the question is to be found. For if we can show that under favorable conditions the human bacillus can become highly pathogenic for cattle, the converse would also seem to hold, that there are conditions under which bovine tubercle bacilli can be pathogenic for man." Dr. Adami concludes that failing experimental and bacteriological evidence of bovine and human tuberculosis, the casuistic evidence while not absolutely convincing is strongly in favor of the view that tuberculosis can be conveyed through the milk of animals extensively diseased.

With regard to the more frequent modes of infection Dr. Adami dismisses rapidly the infectiousness of meat, and goes on to say that with milk the problem presents several difficulties. With the finding of the British Royal commission, that only when the udder is diseased does the milk become infectious, he is not in agreement, being convinced that it is founded on imperfect knowledge, and states that he can not but come to the somewhat unsatisfactory conclusion that whereas, in the first place, the milk of animals not suffering from udder tuberculosis may contain bacilli, nevertheless such milk is not of high infective power, and that therefore the frequency with which the bacteriologist may by inoculation into the very susceptible

guinea-pig find that milk to be infectious is not absolute indication of its danger when employed as a food for man.

Only when there is recognizable udder tuberculosis, and active tubercle bacilli are discharged into the milk in enormous numbers in consequence of ulcerative changes occurring in the tubercles, is there real danger. For practical purposes Dr. Adami agrees with Nocard that as regards the milk supply local tuberculosis of the udder is what has to be most especially guarded against, and this not because the evidence at our disposal affords absolute proof of the transmission of tuberculosis from cattle to man, but because the trend of evidence is all in that direction. On the whole, therefore, Dr. Adami is in accord with the chief authorities on bovine tuberculosis with regard to the means of transmitting the disease to man, that the danger from infection from meat is so slight as not to be worth considering; that the principal source of danger is from infected milk, and that only milk procured from cows with diseased udders is to be greatly feared.

It is satisfactory to observe that at the meeting of the Medical Society of the County of New York the question of a pure milk supply was treated at length, and the president of the society was requested to appoint a special committee to consider the possibility of a commission to improve the milk supply of New York.

Over Pressure the Bane of Modern Education.

The harm done to children by the present methods of education is too real to be ignored, says the Medical Record.

The conditions of civilized life have so completely changed within the past half century that it becomes daily more and more evident that measures must be taken to meet the new situation and to endeavor to propagate a race better fitted to withstand the strain of modern existence.

When children were brought up in the country, spending the greater part of their time in the fresh, open air, considerations as to physical development did not enter into the question. The environment being healthy, and food plentiful and nutritious, the natural sequence was that the human product grew up hardy and robust, well equipped for the battle for life. The ever-increasing tendency to desert the country for the town has placed a fresh problem before our scientific men and sanitarians. Children are born and pass their youth amid unhealthy surroundings, in many instances improperly and irregularly fed. In

addition to these serious disadvantages they are still further handicapped by the undue stress of school life. The sole aim of modern education would seem to consist in the attempt to develop the mind at the expense of the body. The necessity of exercise and fresh air as a part of a child's training is strangely overlooked. Mental and physical education should go hand-in-hand. Wherever possible playgrounds of ample scope should be attached to schools, and, above all, young children should never be expected to work longer than two hours at a stretch.

Dr. J. S. Lankford, of San Antonio, Texas, read at the annual meeting of the Western Texas Medical Society, held in October, 1899, a paper dealing with the evils of the present methods of education. Among other home truths to which he gave expression were: "What shall we say of the death-dealing mental burdens placed upon children? We impart to the child by heredity and example an ambition to know everything, or if he doesn't happen to have that ambition, we proceed to hammer everything into him. We reach out eagerly to grasp and incorporate all the affairs of the universe in our course of instruction. Regardless of aptitude or natural tendency of mind we group the pupils in enormous classes and give them all just the same.

The burden is too heavy, and just as sure as effect follows cause in natural law, our generation of children is being weakened and unbalanced, and still weaker generations will follow. Our great public school system, designed to bless the nation, will become a national curse. This is not a false alarm or an idle prophecy. Visit the schools and see the careworn teachers, always working beyond nature's reasonable limits, and you can better understand why she or he seeks your aid before the middle of the term in order to be able to continue work. And here in this broken-down condition of the teacher we see an index to the heavy course and wrong classification."

The health of the young is a matter of vital importance to a nation. As with individuals, so it is with races in the struggle for predominance, the weakest will go to the wall. To insure the physical and mental well-being of the rising generation considerable modifications in our existing system of education will be necessary. Physical culture is not inconsistent with mental culture, and when this significant fact is thoroughly grasped by our boards of education, the present faulty methods of training the young will be changed to those of more in harmony with the laws of nature.

Koplik's Sign in the Diagnosis of Measles.

The diagnosis is important in all diseases, but an early diagnosis is very important in some affections. To be compelled to wait until the disease is full blown is a great strain on the physician as well as the patient and relatives.

The Maryland Medical Magazine says that in measles before the period of eruptive process one cannot even be sure that an eruptive process of invasion, and diagnosis must be more or less random guess work, while diagnosis on the appearance of eruption is sadly belated. These hours and days of conjecture are dangerous, and extraordinary interest attaches to any new means of early diagnosis.

The appearance of visible mucous membranes in the various eruptive disorders have been long studied, and are described in all the text-books. It remained for Henry Koplik to discover and to describe, in 1896, a lesion of the buccal mucous membrane, which is said to be associated only with measles, and in a majority of instances to precede the skin eruption by a considerable interval. It is likely that Flindt made the same observation some ten years earlier, but the phenomenon is now properly associated with the name of the later observer, who, discovering it independently, has been able to impress its value upon his contemporaries. The results of a special inquiry upon this subject and a partial analysis, following as nearly as possible the language of the witness, follows.

Of the 20 observers, 6 characterize the sign by the word "pathognomonic;" Hirsh, Libman, Lichtenstein, Ross, Sobel, Zahorsky.

The sign is diagnostic when present, according to 17 observers: Adriance, Blackader, Blanton, Cheney, de Saussure, Gilbert, Hirsh, Libman, Lichtenstein, Mitchell, Morse, Ross, Sobel, Taylor, West, Zabriskie, Zahorsky.

These three doubt its diagnostic value: Adams, Cameron, Cotton.

Absence of the spots excludes measles, according to 7 observers: Hirsh, Libman, Lichtenstein, Ross, Sobel, West, Zabriskie.

Absence of the sign does not exclude measles, 5 observers: Adams, Cameron, Cheney, Morse, Zahorsky.

The sign has been observed in advance of the eruption by 13: Adriance, (20 cases out of 96), Blackader, (in every case), Cheney ("frequently"), Gilbert, Libman, Lichtenstein, (as early as 3 days before the eruption), Morse, Mitchell (48 hours before the eruption), Ross, Sobel (from a few hours to 5 days before the eruption), West, Zabriskie, Zahorsky.

Precautions Against the Plague.

Forewarned is forearmed provided we heed the warning and set about in a proper way to meet the expected.

The plague may never become a matter of widespread concern within our own borders, but if it should then all our knowledge of the disease would be in vain except we reduce it to a practical value.

If it were not for wars and rumors of wars, says the Medical Record, which almost monopolize public attention, the spread of the plague to all quarters of the globe would give rise to much more alarm and discussion than are at present the case. The sinister fact, that the disease has for the first time gained a footing in the western hemisphere, does not appear to be regarded as an event of vital importance, and although the occurrence of plague on a vessel in New York harbor created a temporary sensation of dread, this feeling was quickly lulled into one of security, based chiefly on the widespread opinion that it is virtually impossible for the malady to make headway in places where a proper system of sanitation is carried out.

These optimistic views are certainly to a large extent justified by the history of the course of the plague in other parts of the world. Within recent times proof has constantly been afforded that plague rages most virulently among dirty surroundings, and many experts hold that where the environment is cleanly its ravages are easily controlled. However, this latter contention is thought by others to be more or less open to doubt, as there are several instances on record in which the disease has made decided progress under conditions presumably unfavorable to its spread. On more than one occasion after it has been proudly proclaimed that in a certain city or town the plague has been wiped out by the energy displayed in rendering the sanitary system complete, the news has come that a recrudescence has occurred on a larger scale than before. Nevertheless, in the light of experience during the past decade it may be said that efficient sanitation is the best safeguard against plague. In localities where hygienic arrangement are good the bacilli of the disease will find no soil suitable for its incubation and propagation.

Again, our knowledge as to the best means of treating the disease has advanced, albeit but slowly. No absolutely reliable specific has yet been discovered, but investigation has demonstrated its cause, and it has been also shown that when possible isolation of patients and segregation of those exposed to infection are among the most prominent factors in limiting the spread of the plague.

Consequently the enforcement of these measures, a rigid adherence to the laws of sanitation, together with the prophylactic and curative methods now at hand, would seem to provide sufficiently strong barriers against the plague securing any but a temporary foothold in this country.

There is unfortunately a dark side to the question. The plague has not only planted itself in Brazil, but is gradually drawing into its net all the islands of the Pacific, and from these, and especially from the Hawaiian islands, comes the greatest danger of importation into the United States.

The disease promises to spread like wild-fire among the inhabitants of this group, while our traffic to and from Honolulu is considerable and frequent. The conditions prevailing in many of the American towns on the Pacific coast are not such as to warrant the belief that, if the plague were to obtain an entrance, its extermination would be a matter of little difficulty. There is a large Chinese population, and this race is peculiarly predisposed to plague infection. In addition, the climate, overcrowding, and uncleanly habits of the aliens in that part of the United States favor diseases of this description.

The maritime quarantine regulations contained provisions relating to the plague, but the Treasury Department has deemed it expedient under the exceptional circumstances to supplement these with special regulations, which order that at foreign ports and places infected or suspected of being infected with plague the United States quarantine regulations referring to cholera shall be observed with regard to vessels and cargoes bound to the United States. Quarantine regulations relating to cholera are also to be observed at ports and on the frontiers of the United States. Dr. Wyman, the surgeon-general, Marine Hospital service, in a pamphlet recently published by him, speaks thus of the quarantine equipment of this country: "The government is well equipped with quarantine stations for the disinfection of infected vessels, and has besides several large stations where immigrants can be detained in barracks under observation." Dr. Wyman goes on to say: "It seems impossible that the plague should ever again ravage the earth as in previous centuries.

The modern quarantine is effective to a degree. Though old-fashioned and absurd as administered by some of the European countries, and imperfectly executed in others, it nevertheless has proven and will continue to prove a powerful shield against this Asiatic invasion." The following suggestions with respect to public hygiene are

advanced by Dr. Wyman: "The destruction of rats and other rodent animals; the prevention of congregations of individuals, as fairs, celebrations, and pilgrimages; the surveillance and supervision of markets; the cleanliness of the soil; the regular removal of garbage; the cleanliness of habitations; the particular supervision of places, workshops, forges, etc., intended for occupancy by the laboring and industrial classes; the cleaning and regular disinfection of latrines and cesspools; the care and cleaning of gutters, etc. Administrative care should also be brought to bear to improve the sanitary condition of notoriously unsanitary quarters and dwellings."

The primary and principal object in the fight against the plague is to keep the disease out of the country, and this, according to the views of the most distinguished authorities, can be effected only by a strictly rigorous system of maritime quarantine. Our system is undoubtedly a good one, but, if it requires strengthening, nothing should be allowed to stand in the way of legislation tending to the preservation of the health of the country at large. The next and scarcely less important aim is to have our towns in so efficient a state of sanitation that if the disease were to gain an entrance it would be given no opportunity to spread. In this respect many of our seaboard centres of population will be found wanting. Therefore it would be well if the advice proffered by Dr. Wyman regarding public hygiene was taken to heart and promptly acted upon by the city fathers throughout the land.

Osteopathy in New York.

It can be almost laid down as a principle that the greater the fake and the more stupendous the fraud, the harder it is to head it off.

The more senseless the imposition the more difficult is it to protect the people and safeguard our own interests.

In New York the Empire State of the nation the regular profession are being worried by the ridiculous pretensions of the osteopaths.

The Medical Record says that in this and other states, the medical profession has none too easy a time in combating fraud and charlatanism on one hand, and ignorance and stupidity on the other, and the development of something new under these headings, called estopathy, has added a fresh source of difficulty and injustice. The supreme court of New York, in *Smith vs. Lane*, 24 Hun. 632, has decided that a man who practices massage does not prac-

tice medicine, and prosecutions of osteopaths have therefore been discouraged on the assumption that osteopathy is massage.

We cannot see the justice or the force of this form of argument. An osteopath pretends to diagnose and treat by manual means many forms of disease, and does not limit himself to working under the direction of some one else, as is almost invariably the case with the masseur. When the physician wishes a patient to have massage, he prescribes it as he would any other form of treatment, and it is given by an individual trained for such work, the physician still being responsible for the wellfar of the patient.

When the osteopath finds a victim, he makes his own diagnosis, decides on and carries out his own treatment, and is apparently neither legally nor morally responsible in any way for the outcome of his ministrations. We cannot see how the mere fact that the osteopath does not order any drugs for his victim should relieve him of the responsibility of practising or attempting to practice medicine. Does the surgeon who straps a sprained ankle or a fractured rib practise a branch of medical science, or would the law relieve him of responsibility in case of a bad result from such conditions, if he should plead that he had used no internal medication, and was, therefore, not practising medicine? The answer does not require argument. The important fact is that the osteopath presumes to make a diagnosis, and to institute what he dares say is the proper treatment, and this ought to render him liable to prosecution under the medical law, without considering the fact of subsidiary importance that no drug has been actually given.

If the osteopath cannot be reached under the present medical law, there ought to be an amendment, for if something is not done the regular practitioner will actually have less protection than the imprudent charlatan. If a registered physician can be proven before a jury to have been negligent, the complainant can recover heavy damages, but it is very doubtful whether the unregistered and unqualified osteopath could be reached in this way. It would be an excellent thing if the County Medical Society could find out whether, in the eyes of the law, it is not the making of a diagnosis and prescribing of treatment which constitutes practising medicine, and not merely the application of treatment, with a difference between treatment with or without internal medication.

We should certainly try to be sure that any person who pretends to treat or prescribe for the sick or injured in any way, on

his own responsibility and initiative, should be compelled to come up to a certain standard of proficiency in such subjects of anatomy, physiology, and obstetrics, be his system of therapeutics what he likes, and we should be prompt to deny that the osteopath is not attempting to practice medicine, merely because he does not prescribe drugs.

Compensatory Processes in Disease.

By reason of our modern way of living we have to call out the reserves very frequently and sometimes permanently.

The Medical Record well says that were not the animal organism endowed with structure and function in excess of its ordinary needs, disease would obviously be well-nigh universal. Nature has, however, been almost prodigal in this respect, so that destruction of tissue in one situation or loss of function in one organ may be compensated for, in whole or in part, by a readjustment to the new conditions. This result may be brought about in one or more of three ways, as is pointed out by Leube (*Deutsches Archiv für klinische Medizin*, 66 B., p. 80): (1) Portions of a diseased organ may remain healthy, and this residuum may assume the increased function; or one of azygous organs, as for instance the kidneys, may take up the work of the other, if this be diseased or otherwise incapacitated. This form of compensation is illustrated by the hypertrophy of the heart that takes place when the circulation is in any way obstructed, by the hypertrophy of the muscular coat of the stomach when obstruction to the movement of its contents exists, and by the transformation of yellow into red bone-marrow in the presence of anæmic states.

(2) One set of organs or tissues may perform the functions of another set of organs or tissues having a like action. Such reciprocity of function exists, for instance, between the skin and the kidneys, and that of the skin, as pertains to both water and solids, and this fact is often availed of in the treatment of nephritis. Only in the presence of marked cutaneous edema does Leube consider sweating as contraindicated, as the excrementitious matters left behind by the escape of the fluid may be absorbed and thus give rise to toxic symptoms. Instead, he recommends multiple capillary puncture of the skin. The salivary glands and the bronchial mucous membrane are also capable in some degree of assuming the functions of the kidneys, and the gastro-intestinal tract also, but only in very small degree.

There is abundant evidence that the in-

testines are fully capable of replacing the activity of the stomach if this be diminished or abolished from any cause. A mutually reciprocal relation exists between the blood-forming organs: the bone-marrow, the lymphatic glands, and the spleen. In cases of profound anæmia and in the sequence of profuse hemorrhage, evidence of increased hæmogenesis in the bone-marrow becomes appreciable from the change in color from yellow to red, and in the presence of nucleated red corpuscles. The spleen at times undergoes hyperplasia under such conditions, and is often found enlarged. Leube has observed such enlargement in a considerable proportion of cases of chlorosis, and these cases have pursued a more favorable course than those unattended with splenic enlargement. With regard to the white blood-cells, the spleen and the lymphatic glands appear to be concerned especially in the production of lymphocytes, and the bone-marrow principally in that of the granular and amœboid leucocytes. Following splenectomy the lymphocytes in the blood becomes increased.

(3) Organs and tissues may assume the functions of other organs and tissues having a different action. Of this fact application is made therapeutically, diuresis, diaphoresis, and catharsis often being induced with the object of causing absorption of exudates. Having observed rapid disappearance of an accumulation of fluid in the abdominal cavity in the sequence of salivation occurring spontaneously, Leube suggests that at times ptialism might be induced artificially with the same object in view, and he reports four of five cases of pleurisy with effusion and one of two cases of ascites in which rapid absorption of the fluid took place in connection with profuse salivation excited by the chewing of gum.

Dietary Studies of Negroes.

The Medical Record says that Dr. Frissell and Miss Isabel Bevier have in connection with the United States Department of Agriculture contributed a series of dietary studies of negroes living in Eastern Virginia. The studies made in 1897 were conducted by Dr. Frissell, and the investigations on the same lines in 1898 by Miss Isabel Bevier. The mode of life and the quality and quantity of the food of the colored race in the United States is a subject that has received but little attention. Some statistics were collected a few years ago with regard to the food consumption of negroes residing near Tuskegee, Ala.

These investigations showed that where negro families had profited by the opportu-

nities for education provided at Tuskegee Institute, their methods of living had undergone a considerable change, approaching more closely to those of an ordinary American family. Other families who had not come under such influence might be regarded in the matter of diet as representative of the uneducated negro type.

The results of the studies in Virginia coincided in the main with those in Alabama. More protein was found in the dietaries of negro families in Virginia than the average amount consumed by white persons in fairly prosperous circumstances, nearly as large as that called for in the tentative American standard—namely, 125 gm. per man daily. This fact, however, is explained by the proximity of salt water to the district in which the investigations were conducted in Virginia, which made fish an important article of diet. The average fuel value of food consumed per day by the negro families both in Alabama and Virginia is as large or larger than that found in dietary studies made among white families. The average fuel value found in nineteen studies in Virginia was 3,745 calories; that found in twenty studies in Alabama, 3,270; the average of ten white families in New England and New York, 3,515; while the tentative standard for a man at moderate work calls for 3,500 calories per day. Perhaps the most noteworthy feature revealed in connection with these studies was the small cost of the food. For eleven cents the families in Virginia obtained food materials furnishing more protein and more energy than were obtained for twenty-eight cents by the families of professional men in comfortable circumstances, and for nineteen cents by families of well-paid mechanics. It would appear from a consideration of the dietary studies made in Alabama and Virginia among negro families that the character of the food consumed by them is coarser and less appetizing than would be tolerated by an ordinary white family. "Hog and hominy" forms the staple of their diet.

Scarcely any meat besides pork is eaten, but where obtainable fish is a favorite article as food, while at certain seasons frogs, turtles, and even snakes are eaten by some families. The cooking of the negroes is primitive to a degree, and their drinking-water is, as a rule, stagnant and brackish, often muddy. The fact, however, stands out prominently that notwithstanding the agricultural negro's careless, unhygienic methods of living, he is able to do hard manual labor and enjoys almost if not quite as good health as his white brother placed in like circumstances.

Concerning Consultations.

The American Medical Monthly may not be dead right in all things but the advice in the following editorial is well worth reading twice.

Consultations between physicians, in cases of unusual difficulty, where the diagnosis is in doubt or the treatment has been unsatisfactory, are often productive of the happiest results, and, in any event, relieve the minds of relatives, who thus become more reconciled to the situation. There is usually, also, a benefit accruing to the attending physician in the sharing of responsibility and the banishment of doubts and regrets in fatal cases, while in those in whom result has proved favorable, the attending physician often turns something from the consultant.

Wise as we may be, we are constantly humbled into the dust by failures. At times we feel like a friend of ours, who said he had seen every variety of obstetric case that would be likely to be met with, and then may be non-plussed by the very next case that comes under our care. We then acknowledge that Hippocrates of old knew what he was talking about in saying "Life is short and art is long, experience fallacious and judgment difficult."

However learned we may be, however great our knowledge of anatomy and pathology, however good as a diagnostician, however great our experience, there is always something we do not know that another man may know, and this may be just what a patient needs for his recovery. We never know it all.

It would seem to be in accordance with the natural order that when a physician has been in general practice for twenty-five years, he should be in a position to retire from routine practice and become a consultant, ready to give younger men the benefit of his larger and varied experience and observation, and leaving the field of active labor to them. Such a course would not only advance the dignity of the profession, but it would greatly add to the well-being of our patients, and also relieve the present congested condition of the profession, thus giving younger men a better chance.

Two obstacles stand in the way of this change, both of them removable. One is the fact that not many physicians are financially in condition to give up active practice after twenty-five years. This objection will be removed, however, if the increased frequency of consultations from the end of the period suggested, will net a sufficient income. It is further to be suggested that physicians are extravagant in

their way of living. They could spend much less than they do and save more by a careful adaptation of ways and means. In very many instances it would be possible to carry an endowment policy of insurance, falling due at the age of 50 or 55, which would go a long way towards enabling one to give up routine practice at the time mentioned.

But the second objection is more formidable. It is the hesitancy of many men to ask for a consultation for fear the consultant will retain the patient. It is natural for the patient or his relatives to consider the "professor" who is called in, to have more skill than the regular attendant, and therefore the tendency is to call him in on the next occasion. Instances have occurred in which the consultant has acted in such a way as to arouse the just suspicion of the regular attendant. This state of affairs, more than anything else, perhaps, has prevented many consultations, and has been productive of much bad feeling and hardships.

Of course this obstacle may be overcome by a righteous observance of the code of ethics, which is based on the Golden Rule. No physician, who is called in consultation, should allow himself to be persuaded to attend that family, or should he visit them socially if thus introduced. Confidence being thus established between physicians consultations will become more usual and mutual benefit will result.

In the last analysis, however, the actions of physicians in this and all professional relations, are matters of character and character is a matter of religion.

Small Pox and Vaccination.

At the present time we are all interested in small pox and vaccination.

A very exhaustive editorial in the Medical and Surgical Bulletin is worth reading.

By consulting the best medical literature in regard to this subject, we have reason to believe that small-pox was first developed in the earliest ages of which the human family has any record. The disease probably originated in China, India and the adjacent countries of the Asiatic continent, then spreading over Europe and America along the lines of commerce and population.

Perhaps the earliest account of its ravages can be traced to the writers of the latter half of the sixth century, but it was not until the ninth century that it was accurately described by an Arabian physician of Bagdad. His description, however, clearly set forth the views of an Egyptian physi-

cian, named Ahron, who wrote in the sixth century.

During the tenth and eleventh centuries the remarkable political and social changes in Europe resulting in the Crusades, contributed largely to the spread of the disease and to the occurrence later of decimating epidemics, which became veritable scourges, sometimes destroying the entire population of the largest cities.

Small-pox is believed to have been introduced into America by the Spaniards early in the sixteenth century.

As to the primary origin of this disease, probably the most virulent of all the contagia in its effect upon the unprotected subject, we have no historical knowledge; the first cases of the disease must, therefore, be classed with those of spontaneous cow-pox.

At the present time it is regarded as being directly or indirectly transmitted from individuals affected with a similar disease, but as yet no bacteria or germ has been proven to be the cause of the disease. It is conveyed in the secretions and excretions of the body. The pus of the pustule is the most fertile source; the dust coming from the dried pus scales is the more common medium of its distribution, it being inhaled, therefore the lungs are the most frequent avenue of inoculation.

Small-pox is an acute, febrile, contagious and systemic affection, preceded by an incubation period, and especially characterized by an eruption which passes through the successive stages of papule, vesicle, pustule, desiccation and desquamation, and terminating either fatally or by complete recovery, with or without sequelæ in the form of multiple, circumscribed and superficial cicatrices.

The contagion is very tenacious, sometimes remaining dormant for months in clothing or hangings. It affects all ages; even the fœtus in utero may acquire it from the mother. No sex or race is exempt. The negro is particularly prone to the disease.

Small-pox is more prevalent during the winter months. One attack as a rule confers immunity.

The essential morbid anatomy of small-pox is that of the eruption in all its various stages and modifications. The pustule begins in the rete mucosum, the center being a focus of coagulation necrosis; the reticular spaces about it are filled with serum, leucocytes and fibrin ferment. If the process does not go deeper recovery takes place without pitting. But in the more severe cases the papillæ of the true skin are involved, causing a loss of tissue, and resulting in the formation of a scar.

Incubation is said to last from seven to fifteen days. The patient may feel perfectly well or may suffer from malaise, anorexia, languor, insomnia and allied symptoms. If observed closely during this stage, the face will be seen to present a peculiar pallor resembling sallowness.

The symptoms which characterize the stage of invasion, which usually lasts three days, and is the time between incubation and the appearance of the first cutaneous lesion on the surface, or chilliness, accompanied by a sensation of creeping, usually intense headache, violent aching pain in the back, the temperature rises rapidly to 103 deg. or 105 deg. F., the pulse is rapid, hard and strong at this stage, and in children delirium may be present.

The prodromal rash occurs about the second day, and is a diffuse, scarlatinous rash, dark red in color, paling under pressure, but does not leave a white line if the finger nail is drawn quickly over the skin, as in the scarlatinal rash. It is usually confined to the abdomen, inner surface of the thighs, or the lateral region of the thorax and axilla.

Upon the subsidence of the stage of invasion, the exanthem of the disease, as a rule, appears. This is usually on the fourth day. The distinctive eruption first appears in the shape of small red spots, first on the forehead and wrists, but becoming general in the first twenty-four hours. The eruption is pin-head size, firm, conical, discrete, coherent or confluent reddish papules. At this stage it resembles very much the rash of measles, but in another twenty-four hours papules have become very much harder, and feel not unlike shot imbedded in the skin.

When the eruption appears the fever falls, and the patient feels comfortable.

The pock mark is usually mature by the sixth day of the eruption. It is pea-sized and globular in shape, and is umbilicated, this being the most characteristic feature of the eruption. At first it is filled with clear or slightly turbid serum. By the eighth day it becomes pustular and the umbilication disappears.

Upon the appearance of the pustule the secondary or suppurative fever begins, ranging between 101 deg. and 105 deg. F., and is accompanied by the usual signs of fever. During its continuance, from the eighth or ninth to the eleventh or twelfth day of the disease, the patient is in a deplorable and critical condition. Pain, due to the tension in the inflamed parts, is severe, and the patient usually lies conscious, but in a stolid apathy, listlessly accepting the services of his attendant. In more severe cases delirium of a low or high grade may be present.

On the eleventh or twelfth day of the disease the pustules become dry. By the fourteenth day they are converted into crusts, which drop off, leaving in mild cases only a simple discoloration. In severe cases an ulcer is left which, when healed, leaves a pit.

The most severe variety of small-pox is the hemorrhagic form, of which there are two varieties, the purpura variolosa and the variola hæmorrhagica pustulosa. Of these forms we see very little, as the patient dies in from two to six days, sometimes before the eruption makes its appearance.

A third variety is varioloid, which is small-pox modified by vaccination or a previous attack of small-pox. All symptoms are rendered very much milder.

We now come to a very important subject, one that should be of interest to every practitioner, that of vaccination for the prevention of small-pox. The local and general symptoms resulting from the introduction into the blood of man of the contents of the vesicle of kine-pox, or small-pox as occurring in cattle, is called vaccinia, or vaccine disease.

The communication of small-pox to prevent the same reaches back into antiquity. In the Sanscrit Vedas we find mention of the fact that the Brahmins employed this method for the prevention of small-pox. They employed pus procured from small-pox vesicles a year previous. Their method of inoculation was not dissimilar to our method of the present day. They first rubbed the place selected for operation until the skin was red, then made several scratches with a sharp instrument, and laid upon the freshly prepared place cotton soaked in the variolus pus, moistened with water from the sacred Ganges. Careful hygienic regulations were also carried out. Among the Chinese "pock-sowing" was practiced. As far back as ten centuries before Christ the Celestials saturated pledges of cotton with variolous pus and introduced them into the nasal cavities of children.

The Circassians and Arabians used needles for inoculation. In some parts of Northern Africa inoculation by means of incisions between the fingers was practiced. And among some of the negroes the inoculation was done in or upon the nose.

In 1714 Timoni of Constantinople reported that the custom had long been naturalized in that city, and was practiced by old women, instructed in the art, who regarded it as a revelation of Saint Mary.

In 1721 Lady Mary Wortley Montagu, wife of the English ambassador to Turkey, returned to England, being the first to in-

roduce the practice there. Her son was inoculated in Constantinople by Maitland, and later her daughter was also inoculated. At this time Maitland experimented upon criminals. It proved very satisfactory, and after this the procedure was looked upon with more favor. The Prince of Wales and his sisters were inoculated by Mead, and the practice of vaccination was speedily adopted in America as well as in England. It met with general favor in Germany, and a little later was practiced in France.

The first inoculation with cow-pox was performed in 1774 by an English farmer of Gloucester, named Benjamin Jesty. It seems to have been a common practice, especially among the dairy people.

However, the man that subjected the popular impression in question to the test of scientific investigation, proved the truth and demonstrated its value to the world was Edward Jenner, an English country physician. He performed the first vaccination in 1796, upon a boy, using matter from the hand of a milkmaid, who had been previously infected by cow-pox.

The first vaccination done in the United States was performed by Dr. Waterhouse of Harvard, in 1800, upon four of his own children.

The transmission of humanized virus through the system of the cow, and its subsequent employment in vaccination of human beings, was first practiced by Troja (1747-1827) of Naples. At the present time it is almost the universal practice to use the lymph from the cow. The chief reason for using animal lymph is the fact that all danger of communicating other affections, especially syphilis, is avoided, and it is also believed that protection is more certainly assured. In this country the more usual method of preparing the lymph for use is to allow it to dry on ivory points or quills, or it is collected in capillary tubes and sealed.

After vaccination a slight redness appears, but rapidly subsides. About the third day a red elevation occurs, developing into an umbilicated vesicle filled with a transparent viscid fluid, surrounded by a red areola.

By the six day the vesicle presents a shiny, silvery appearance, and by the tenth day the pock has reached its full development, being umbilicated, as in genuine small-pox. Itching is intense, and in adults it produces an almost irresistible desire to scratch, while in infants it produces fretfulness.

The disease begins to decline on the eleventh or twelfth day, and by the fourteenth day the vesicle is covered by a dry,

brown scab, which drops off about the twenty-fifth day, leaving a pitted scar, very distinct at first, but gradually becoming paler than the surrounding tissue.

That vaccination really does protect against small-pox observation has taught the whole civilized world. No one need be left in the dark in regard to this point, as the statistics are so plain it is impossible to mistake their true meaning.

In Sweden the average number of deaths from small-pox per annum, per million inhabitants, was, before the introduction of vaccination, 1,973: during the period of optional vaccination, 479. After vaccination was made compulsory this frightful death rate declined to 189 per 1,000,000.

During forty-two years of duty at the London Small-pox Hospital Dr. Marson has never observed a single case of small-pox in the officers and attendants of the hospital, who are compelled to be revaccinated when they enter the service, and who are constantly exposed to the infection.

In the Bavarian army, where vaccination was compulsory, there was not a single death from small-pox nor a case of unmodified small-pox from 1843 to 1857.

In the State of Michigan, by making a comparison between the five years preceding the establishment of the State Board of Health with the fourteen years (1874 to 1887) since its existence, allowing for increase in population, shows the death rate of small-pox has been reduced 6.62 persons per year 100,000 inhabitants. Vaccination in Michigan is not compulsory, but vaccination is done without cost, being paid for by the city, village or township, as the case may be.

In New York City much the same plan has been carried out since 1876. Before this date the deaths from small-pox averaged 59.57 per 100,000 per year. Since this date they have averaged 8.38 per 100,000 per year, and this average is yearly being reduced.

From the foregoing facts it is not hard to see that with compulsory vaccination it would be only a short time before small-pox would be a rare disease, but unless such measures are universally adopted and enforced by suitable legal enactments the disease must from time to time threaten the lives of our citizens, and the medical profession will have no other alternative than to fight it with the best means we have at hand.

When small-pox appears in a community the chief aim should be to prevent its spreading. This is best accomplished by isolation of the patient. This can be done in only one way, and that is by removing the

patient to a hospital especially appointed for such cases. In every city a permanent, well-equipped institution of this kind is an absolute necessity. It should be located remote from the thickly settled parts, but at the same time it should be easy and ready of access.

The hospital should be provided with closed ambulances for the transportation of patients. Private or public conveyances should not be used for this purpose.

When a case of small-pox occurs in a family, all the members of the family should be vaccinated at once, and the patient removed to the hospital. All persons known to have been exposed to the disease should be quarantined for fourteen days. If the patient is to be treated at home he should be isolated as much as possible. Usually a room on the top floor is preferable, and no one should be admitted except the nurse or attendant, who has been previously vaccinated. The clothing of the attendant should be of such material as can be readily boiled. He should not come in contact with any one while engaged with the case, and when leaving he should bathe thoroughly and don new clothes. The physician should take every precaution to prevent being the means of communicating the contagion.

Another means of preventing the spread of small-pox is to apprise the public of the particular locality where the disease exists.

Thorough disinfection of all articles used about the small-pox case is a highly important prophylactic measure, and should be scrupulously carried out.

Bodies of persons who have died of small-pox should be wrapped in a sheet saturated with corrosive sublimate 1 to 500, or with a solution of chloride of lime, and be buried at once.

After the sick chamber has been vacated by the patient, either by recovery or death, every article of no value should be burned, the others should be rigidly disinfected, and the entire house well fumigated. One cannot be too careful in trying to prevent the spread of this dreaded disease.

Fresh Air and the Death-Rate of the Plague.

In view of the possibility that the plague may become a well-known disease in Europe and America before many years have passed, some figures published by Weir, one of the officers of the Sanitary Service of Bombay are full of interest, says the Medical News.

He hit upon the idea that the mortality was greater among patients who live on the ground floor than among those living in

higher stories. By establishing cases according to the story in which they occurred he found a striking decrease in the death-rate with each additional flight of stairs. Thus the mortality among patients living on the ground floor was 84.7 per cent. For each successive story the mortality was as follows. First, 75.5 per cent.; second, 67.3 per cent.; third, 59.7 per cent.; fourth, 58.1 per cent.; fifth, 45.4 per cent. Buildings in Bombay are not so constructed as to permit an investigator to extend his observations above the fifth story. Proceeding, however, along the same line, the mortality in the tenth story would be 22.7 per cent.; in the fifteenth, 11.4 per cent., and in the twentieth story, 5.7 per cent.

Who will dare to guess the amount of rent which the owner of the tallest building will receive for his top story, if the plague reaches Chicago!

In the densest portion of Bombay the houses are built on narrow streets and are surrounded by broad, low verandas, which permit scarcely any air or light to penetrate into the lower stories of the central part of buildings. This decreased mortality for the residents of upper stories held good not only in such houses, but also in better built ones. Moreover, people living in separate houses, as in the country districts, recover from the plague in a far greater proportion than those living in close quarters. The Indian government is considering the advisability of tearing down and rebuilding the houses in the worst district of Bombay, so that the tenants shall have a reasonable amount of light and air. If the new buildings are to be put on a paying basis, however, the rent necessary charged will be entirely beyond the reach of the inhabitants of the present structures which they aim to replace.

In this connection may also be mentioned the plan proposed by Pierre Apéry of Constantinople to rid an infected ship of rats. It is a well-known fact that rats are capable of spreading the plague; hence to fumigate a ship and leave a horde of rats in its hold is a comparatively useless procedure. Apéry's plan is to tow the ship a mile or more from land. Cheese and fragments of food are scattered in the most accessible portion of the hold in order to bring together all the rats. A generator of carbonic acid gas is then set to work to form enough gas to displace the air in the lower portion of the ship. Owing to the weight of this gas it sinks slowly to the bottom and gradually displaces all the air. As a mixture of one part carbonic acid gas and two parts of air is sufficient to suffocate an animal it will not be long before the diffusion

of the gas will kill all the rats. As the gas has no unpleasant odor or taste animals are not frightened by it and even if a few should jump overboard the distance from land is so great that they will be drowned. The upper level of the gas may be determined by lowering a lighted candle into the hold. When the gas is reached the candle will be extinguished. When the rats have been killed the carbonic acid gas may be pumped out of the ship. The bodies of the vermin are then collected, disinfected, and destroyed. This method of procedure is simple, easily carried out, and inexpensive in comparison with the effects it accomplishes.

Open Air and Tuberculosis.

The open air treatment of consumption is up for consideration very frequently now. In commenting on the discussion by the Royal Medical and Chirurgical Society of London of the open air treatment of tuberculosis, the Hospital says that the general result may not unfairly be summed up by saying that there is no "open air" treatment in the popular sense of the words. Tuberculosis depends on the invasion of the body by a bacillus, which flourishes chiefly in badly-lighted and badly aerated localities, and languishes, comparatively speaking, when exposed to fresh air and sunshine. These agencies, although detrimental to the invaders, are eminently advantageous to the invaded, and their proper application will suffice, in a large proportion of cases seen at a sufficiently early stage, to turn a nearly balanced scale in favor of the forces of resistance. In other words, the bacilli will die out instead of the patient, and, after the lapse of a period, measurable more often by years than by months, the effects of the invasion will be so far recovered from as to permit a resumption of the occupations, and, to some extent, even of the freedoms, of health.

It is obvious that the conditions thus laid down are beyond the reach of all but the comparatively wealthy, and that the necessity which would generally compel members of the industrial classes to resume remunerative occupations as soon as their strength would permit must in every case present a formidable impediment to the real and permanent usefulness of special "sanatoria" maintained by the charitable as hospitals for the tuberculous poor. It is less obvious, but is rendered none the less clear by the discussion, that the rich will not be likely to derive benefit from resort to so-called "sanatoria" in which the medical supervision and control are insufficient, or in which inmates are allowed to please themselves

with regard to matters on which it is necessary, if good is to be done, that they should submit implicitly to the directions of the physician. The temperature to which they should be exposed, the kind and amount of food which they should consume, the extent to which they should mix socially with others, and the degree in which they should be kept at rest or permitted to be active, are all questions which require individual determination for each patient; and in respect of which the laxity of a "dividend-earning" establishment would frequently be fatal to every prospect of improvement.

These, unfortunately, are among the very points as to which silly and obstinate inmates would persist, we will not say in judging for themselves, but in acting on their own inclinations without the preliminary of a judgment which it would be beyond their power to form. The discussion further afforded interesting evidence, in the speeches of Pearce Gould and of the President, how much earlier the value of fresh air in tuberculous affections was recognised by surgeons than by physicians; and reminded us of the way in which the late Mr. Solly, when St. Thomas's Hospital was in occupation of temporary premises in which the separation of the medical from the surgical wards was incomplete, used to complain of the difficulty of securing proper ventilation for his cases. "The physicians," he said, "think foul air is a specific for phthisis."

Malignant Syphilis.

In a discussion of a case of hereditary syphilis which had destroyed the nose, spine and part of the bone floor of the skull in a child of six years, Besnier recommended pushing mercurial treatment to its utmost limits, and going far beyond the normal doses. Fournier reported cases rebellious to injections of calomel and inunctions, but cured by combining the two; and Galezowsky related the case of an officer dismissed from the service on account of atrophy of the papilla of the optic nerve, who took mercurial inunctions every day for two years and recovered his sight completely. In such obstinate cases potassium iodid detracts from the benefits of the mercurial treatment and should be omitted.—*Munch Med. Woch.*

The Supreme Court of Pennsylvania sustains the State Board of Health in an order intended to exclude unvaccinated children from the public schools of that State.—*Richmond Journal of Practice*

Contract or Company Doctors.

Why a doctor wants to bow down and worship a corporation or company we cannot understand. It cannot be for the money there is in it, for of all the work the doctor does he gets the least out of his contract work in the way of money. Besides he suffers a considerable loss of self-respect when he allows any one, company or corporation, to fix his fees, to say just how much he shall charge for his work.

Lots of cotton pickers have more backbone in regard to charges than some doctors. The American Practitioner and News says that it has long been a custom for railroads and other large corporations to employ doctors by the year for a nominal sum to do the work for the company, or rather to take care of those injured in their employ. The amount that is usually received for these services is only a small per cent. of what the ordinary fee for such services would be. There is no justice in this practice. The surgeon does himself an injustice, and his brother surgeons and physicians likewise must suffer.

The compensation to the ordinary local railroad surgeon is a pass over the line. This may or may not be equivalent to so much cash, and the prestige given him by being in the service of the road may help him, and he is more excusable for accepting such pay for his services than a surgeon in the city who accepts a nominal fee for services rendered that are worth many times the value which he receives.

These corporations above all other people are more able to pay for services rendered their help than any one else; and no doubt the heads of these corporations laugh in their sleeves when they write a check for \$100, \$200, or \$300, when they know that it should be as many thousand. A local sport said, some years since, that there was a "sucker born every minute," and it does seem that the medical profession has more than its quota of gullible gentry.

Modified Milk.

The imitation of nature in the matter of infant food is a very hard matter to come at with any degree of faithfulness, but "if at first you don't succeed, etc."

The preparation of cow's milk, according to the Archives of Pediatrics, so that it approximates the composition of human milk, has been for many years a subject for study and investigation. The ingredients of cow's milk vary constantly in their proportions, but the average percentages have been determined by a large number of analyses that are now so carefully recorded that any

modification of milk has a basis of accuracy.

Milk may be made suitable for each individual infant in its particular requirements of growth. The bacteriological investigations on the keeping quality of milk and the effect that pathogenic bacteria may have when introduced into the system through the medium of the milk have led to its sterilization and pasteurization. We know the degree of heat necessary to destroy the various bacteria in milk to make it a safe food.

Milk laboratories have become important adjuncts in the system of infant feeding, and they represent the best endeavors of our profession to secure accuracy in the modification of milk. Lately, however, we have come to recognize that some infants fed on accurate percentages of fat and proteids in milk prepared in milk laboratories have failed to gain in strength and vigor. The influence of heat on protoplasm, and the separation of the "vital" constituents of milk may not express definite changes, and what it is that renders a fresh milk diluted and slightly heated more valuable to some babies than a laboratory modification we do not know; but we are sure of the fact that the fresher and cleaner cow's milk is in the preparation of infant food, the more valuable it will be as a substitute for mother's milk.

Diet in Consumption.

Increase in weight means a better condition of the body in general and greater ability to throw off disease products.

According to the Medical News patients who have been successfully treated in German and Swiss sanatoria insist especially upon the quantities of food that they found themselves able to consume under the direction of their physicians. At Nordrach, for instance, the rule is for the patient to eat twice as much as he has previously been accustomed to eat, and patients very soon fail to find it the task they anticipated.

Abundant food is a very serious consideration; for the weight of the patient is an important element in his constitutional resistive vitality. Some years ago the New York Mutual Life Insurance Company showed from mortuary statistics that "of persons with untainted family histories twice as many died among those who were under weight with respect to their height as those above the average weight; that family history influenced the consumption death-rate far less than the personal condition (referring especially to the normal weight), and that it is, therefore, a far less valuable indication of an underlying phthisical predisposition."

All experience coincides in proclaiming the vital importance of a gain in weight for patients suffering from consumption. Practically all the lauded specifics for the disease have been such as acted as tonics and increased the appetite. The influence of suggestion in all cases of tuberculosis seems undoubtedly due to this tonic effect renewed hope upon the patient. The great specific concealed behind all the others that have been used, and making them all for a time seem of value, is the increased consumption and assimilation of food that they have induced. It is this that must constitute the groundwork of any successful method of treating consumption, and just as soon as the general nutrition fails to improve, any remedy or method of treatment will inevitably fail.

Newspaper Prescribing.

Some of the daily papers in our larger American cities have established departments in which ailing people of an economic turn are giving medical advice gratis, says the International Medical Magazine. Thus, each of these ambitious journals possesses now, in addition to its musical and dramatic editor, society editor and sporting editor, a more or less regularly educated physician as its "medical editor."

Without stopping to moralize on the degenerative conditions which permit our great profession to be disgraced by the readiness with which certain of its members can be induced to prostitute their talents in such a manner, we pass on to consider briefly the absurdity and the dangers of this new method of obtaining professional advice free. If it is difficult, as it manifestly is in many cases, for even an experienced and capable physician to prescribe intelligently and successfully after merely looking at the tongue and feeling the pulse, with a passing glance at the *tout ensemble* of a patient, but without a careful examination, how impossible it must be for the tyros or incompetent (who alone of medical men could be seduced into accepting such positions) to prescribe with any good result for persons they have never seen!

We have recently met with a man who has had the temerity to tempt death by asking some of these ready-made, job-lot newspaper prescriptions. Some other gullible person had written to the "medical editor," stating his symptoms. In reply the latter had confidently made the diagnosis of gastric catarrh, and prescribed a solution of glauber salt to be taken several times a day before meals and a very strong

hydrochloric acid mixture to be taken after meals. They were stock prescriptions such as recur half a dozen times in every column of his matter. The "medical editor" evidently does not consider stomach tubes or chemical analysis necessary to a diagnosis of gastric catarrh and has not learned that there can be a sthenic gastritis with an excess of hydrochloric acid as well as an asthenic form with a deficiency of that acid.

Nobody knows what ever became of the person for whom the prescriptions were intended, but the other man, above referred to, having read the letter of enquiry and the reply, thought they fitted his case, and proceeded to try them. The glauber salt purged him excessively, though his bowels had been entirely regular before; but, nothing daunted, he cut the other prescription out and took it to a drug store. Fortunately, the apothecary was honest, and, having read the prescription and been asked if he would compound it, replied emphatically: "No, sir; not on your life. It would not be safe for you to take such an amount of acid as is here ordered."

It so happened that the man needed a mineral acid as little as he needed the purgative, since he was suffering at the time with hyperchlorhydria. Further comment on such newspaper prescribing seems unnecessary.

Status Epilepticus.

The symptomatology and pathology of status epilepticus are deservedly receiving much attention at the hands of neurologists, says the Medical Record. The status in epilepsy is fairly well recognized now to be the acme or climax of the disease; that is, given the greatest number of contributing causes, the epileptic is foredoomed to die of the status as the maximum development of the disease. Certainly chance plays no part in the production of status.

Throughout all the present-day definitions of status epilepticus, we find that the constant factors of rapidity repeated seizures and the progressive deepening coma are always included as the essentials of the condition. There is also a marked elevation in the fever, pulse, and respiratory curves. Some still hold that status is seen only in certain kinds of epilepsy; but by far the greater number of authorities maintain the more logical ground that the condition may occur in all epilepsies. An interesting point is disclosed by recent investigations, as there appears to be a necessity for reviving the old theory of cortical heat centres (Eulenburg and Landois) to explain the high temperature in status epilepticus

composed entirely of psychic attacks. The fever curve of status still remains mysterious, although it is generally in direct ratio with the severity and number of epileptic convulsions. Inasmuch as this rule is not always true, there are evidently latent factors in heat production in the epileptic paroxysms, which are not referable to the muscular convulsions. The understanding of the anomalous fever curves in status will probably rest for ultimate solution upon its etiological pathology. After all, the enigma of the fever curve is not more difficult of solution than the loss of consciousness in isolated convulsions of epilepsy proper. The length of time after the disease of epilepsy begins and the time when status will occur is a point of great practical importance to all physicians. Recent statistics seem to prove that epilepsies developed in later life have status in a shorter period of time than when the epilepsy is contracted in early life. However this may be, it is certain that the disease of epilepsy in the majority of cases must be very well established before status will supervene. Epileptics may never have more than one status period, or may have six or seven, although the latter number is quite rare. Cases are not unknown in which patients have recovered from status and also from the epilepsy proper; although it is now generally conceded that status is the severest manifestation of epilepsy, and but few patients ever recover from their disease when status has once occurred.

The influence of menstruation and pregnancies upon the production of status in epileptic women is *nil*. It is as infrequent a clinical experience to see true status develop from the menstrual period as it is common to see serial attacks of major hysteria at such epochs. This fact alone aids one much in the differential diagnosis.

The immediate cause of status is still as indefinite as that of epilepsy proper, and the solution of the problem probably rests upon the discovery of the pathology of the affection and the modifying agencies of the individual's resistance to the progress of the disease. Its pathology, beyond a vascular and cellular degeneration of the cortex, is still obscure. Oftentimes the vascular and cellular degeneration is really a result rather than a cause of the status. The actual onset of status does not differ from the beginning of serial attacks, and serial periods, without status, are frequently termed aborted or pseudo-status. Careful attention to these periods frequently delays the presence of true status epilepticus in the individual patient. The gradual, step-like advance of

the grave symptoms is the cardinal factor in forming a prognosis of status.

The advance of knowledge of treatment of status is not great. A significant fact of the futility of medicinal treatment is seen in that all plans of medication are of service in isolated cases. The percentage of recoveries remains about sixty or seventy in spite of improved methods of treatment. In the medication of status it should always be borne in mind that that which is indicated for the convulsive stage is contraindicated for the stuporous stage, and that the administration of large doses of chloral, uncombined with other drugs, has come to be considered as dangerous medication, in the light of depressing effects obtained from chloral upon weak hearts. Notwithstanding the frequent abscess formations from hypodermic bromide medication, this line of treatment is steadily growing in favor in the severest cases of status. Good general nursing is nowhere more needed than in giving proper care to epileptics suffering from status, either in their own homes or in special hospitals for this disease.

MISCELLANEOUS.

Minister's Farewell Address.

"Brethren and sisters, it seems to me that the Lord does not love this people, because He never takes any of you to heaven; there hasn't been a funeral here for five years. It does not seem to that you love one another, because nobody ever gets married. I haven't had a wedding fee for a long time. It doesn't seem to me that you love your minister, for you never pay his salary in full; you eke it out with potatoes and wormy apples, and by their fruits ye shall know them. I am going to a better place. I have been appointed chulpain to the penitentiary, and I will prepare a place for you."—*Canadian Practitioner and Review*.

Leucorrhœa.

"Dioiburnia is nearly a specific in Leucorrhœa. The ingredients are all good. The combination better. I used it in a case of Leucorrhœa of long standing and it did excellent work. I do not think it will disappoint any practitioner. (I gave it in desertspoonful doses). I recommend it and shall continue its use. As the formula is given, physicians not be afraid to try it, for it is no secret nostrum."

A. D. Brooks, M. D.

Grand Island, N. Y.

The Ingestion of Oil in Pyloric Stenosis.

Dr. P. Cohnheim relates the case of a man suffering from gastrectasis, who was attending Boas' clinique (*La Semaine Medicale*, January 3, 1900), who kept himself in good health by the systematic ingestion of oil. His dilated stomach had followed a contusion of the abdomen, and was apparently due to pyloric stenosis resulting from the cicatricial contractions of a traumatic lesion (ulcer, rupture of the mucons membrane, or hæmatoma of the gastric wall).

The patient suffered from a sharp smarting pain in the epigastrium, and vomiting of food. The signs of gastrectasis were well marked. Improvement up to a certain point only was obtained by lavage of the stomach. On the advice of a friend the patient commenced taking a liqueur-glassful of linseed-oil night and morning, and had the satisfaction of gradually losing his discomfort and painful symptoms, until at the end of five weeks he felt quite well. At the outset, before taking the oil in the morning fasting, the patient took care to empty his stomach by provoking efforts at vomiting; the contributory assistance afforded by this voluntary evacuation of his stomach, however, soon became less and less necessary.

At the present time he is free from digestive disturbance, and only has recourse to the oil after excesses at the table.

There is room for supposing that in this case the oil had the effect of facilitating the passage of the food from the stomach to the duodenum by lubricating the walls of the gastro-intestinal canal, and of lessening the irritation and associated spasm of the pylorus.

Basing his opinion on this observation, Dr. Cohnheim advises a trial of this treatment by oil in all cases of pyloric obstruction before deciding on any operative interference.—*Treatment*.

Suwanee, Ga., a town of 400 inhabitants, has adopted a novel way of obtaining a physician for the town. Not long ago the old resident physician died, so that a meeting of the leading citizens was held, at which they decided to advertise for a physician, and from the applicants this committee should make a selection. It seems as if this was done, applications came in all the way from New York to Texas. Finally, out of the large number, Dr. O. B. Tucker was selected. In the *Atlanta Constitution* of recent date the following biographical sketch was telegraphed to that paper by the Suwanee correspondent:

He is the son of Dr. W. B. Tucker, of

Chipley, Ga. He is a young man of unusually prepossessing appearance. His hair is kept parted with unerring precision from a point just over his nose straight back to where fashion has dictated that parts must stop. His hair is long, and graceful locks that would naturally fall over his ears are given an upward twist and protrude on either side on a level with his eyes.

It is unnecessary to deal further with the personal appearance of Dr. Tucker. Suffice it to say that the remainder of his appearance is equally as striking as his head.

Dr. Tucker is an interesting conversationalist, although he dislikes talking about himself. He did, however, say in regard to his application for the position at Suwanee: "I made application for the position here because I felt that I was competent. I took a course at the Atlanta Medical College during 1897 and 1898, but did not attempt to graduate from that institution. During the latter part of 1898 and the first part of 1899 I attended the medical department of the University of Georgia at Augusta.

"From there I went to the University of the South at Suwanee, Tenn., from which I graduated on January 1, 1900. I was on the staff of the Suwanee Charity Hospital, and have dealt with all sorts and manner of diseases."

The age of Dr. Tucker is still in doubt, as he has refused to announce just how old he is. Among the residents of Suwanee the guesses range from twenty-six to thirty years, and it is said that bets have been made, although they were declared off because of the reticence of the young physician.

In appearance he is about twenty or twenty-one years of age, although in learning he is doubtless much older. In reply to a question in regard to his age Dr. Tucker said:

"It is best, I think, when any one asks me my age, to give an evasive reply, because they might not be satisfied and there is so much prejudice against young physicians these days. If I keep silent they will have no cause to complain and we will be better off all around."

Dr. Tucker is already a prominent man in Suwanee. He is now known to the leading citizens of that place as "Doc," which is a name given only to those who hold the confidence of their fellows. He is going to be a member of the city council; there is no doubt of that. His name has already been mentioned, and it is understood that it is meeting approval on all sides.—*The Atlanta Journal-Record of Medicine*.

The Religio-Phobia of many school boards and superintendents, says the "Muskegan News," is one of the peculiar diseases of the timer. Nothing of a religious character must be read, taught or talked in the school room for fear the opinions of some taxpayer might be antagonized. It is funny that these same school boards and superintendents care little for the opinions of the taxpayers in regard to other matters connected with the school curriculum. The fact that a number of taxpayers do not believe, for instance, in teaching physiology in the schools in grades lower than the High school, does not appear to cut any figure, but if something religious is taught the school authorities appear to go mad at once. No school system can be conducted with deference to the opinions of all the taxpayers, and why religion should be ostracized, because a few cranks in the community desire it, is past finding out in reason. The latest and worse case of religiophobia is that of Dr. E. B. Andrews, the superintendent of the schools of Chicago, who refuses to allow Kipling's *Recessional* to be read in the schools because some athiest might object. He might as well refuse to allow the constitution of the United States to be read because some anarchist might object.—*The Sanitarian*.

Positively the latest of the recent cures is one which is heralded from Missouri. The "healer's" operations are said to extend from Maine to California. The wonderful discovery consists of a recognition of the fact that poverty is a disease and can be cured. Treatments cost but one dollar and are based upon the "absent" system inaugurated by the Christian Scientists. All that is necessary for the patient to do is to keep his mind in a receptive state and stop lending money. If the patient loans money the cure will not "work." In the account of the operations of this cure, the experience of a number of disappointed patients is given, but there are some who seem to have been greatly "benefitted." For example, H. L. Monin writes from Chicago: "I sent you \$1.00 a month ago, which was the last dollar I had, and I was the most discouraged down-hearted man you ever saw in your life. Three weeks after you commenced to treat me for business success I had \$35.00. I was full of life and energy, as spry as a young man, energetic and eager for business." A young man writes from Terre Haute, Ind.: "After reading your article on poverty, hope came to me for the first time in my life and I sent for your treatment. After taking your treatment for

one month I am completely changed. I feel now that a long and prosperous life is before me and I intend to make my mark in the world." Another correspondent enthusiastically says "the vibrations of his mind have been changed."

The above reminds one of the letter of Mark Twain in recommending his self-pasting scrap book. He stated that for years he had suffered from salt rheum, dry tetter, scrofula and rheumatism; in fact, his health was so impaired that he could scarcely stand without assistance or speak the truth with it, but after he invented his self-pasting scrap book all of these troubles disappeared.—*Medical Review*.

Some irregular practitioners of this cit have evolved what seems to be a new method for filling their waiting rooms. They write letters to business men asking them to come to their office at a certain fixed hour when they will learn something greatly to their advantage. It is uncertain whether any of the victims of this scheme have learned anything from their trip, but we are reliably informed that the quacks themselves have on one or two occasions received some definite information from their victims.—*Cleveland Journal of Medicine*.

Unreasonable Man.

"I like variety in my eating," declares Sterlingworth.

"And yet you positively refuse to eat hash," replied his wife, with rebuke in her tone.—*Detroit Free Press*,

DYSMENORRHEA.

"I have tried Dioviburnia in several obstinate cases of Dysmenorrhea and it acted like a charm. I have since used it a great deal and find it satisfactory in all cases."

I. F. Huff. M. D., Schnecksville, Pa.

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No 32 BOTTLE.

Changes into Sad Bag (is both in and out). Finest, best durable leather finish outside and in (lined). Contents: 141-oz. rubb 18 6-dr. cork S.—To 32 bottles, with space between rows of powder papers, 28 sun spaces, one under lid, 7 1/4 x 2 1/4 x 2 1/4. Delivered, privilege of examination, C. D., bal. \$8.50; or, press paid, \$9, if you remit \$1 ear best fee. We sell Sad Bags low as \$4.75. 24-bottle, with 2 S-spaces, \$5.50. B "Leader" Buggy Case, 26 3-dr.—26 6-dr., 4 3-oz. bottles springs, laundry space, \$4.75. We mail full time price and illustrations (on mentioning this Journal) if asked for.

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"Resinol is the best remedy I have ever used in Pruritus Ani.

GEO. H. SMITH, M. D., Brooklyn, N. Y."

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RESINAOL has given me entire satisfaction. Its wide range of usefulness especially recommends it.—

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I am more than pleased with UNGUENTUM RESINOL.—C. B. WALRAD, M. D., Johnstown N. Y.

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NEW YORK.

Blackwater Fever.

W. H. Crosse, consulting medical officer to the Royal Niger Company, in *The Lancet* of January 6, 1900, claims that blackwater bears the same relation to malarial fever as hyperthermia to any of the ordinary fevers. He regards it as merely a severe form of malarial infection, and in this differs from Koch, who is of the opinion that this disorder is not caused by the malarial parasite. Koch claims that the disorder is due to the administration of quinine, but Crosse reports a case in which it develops in a patient who had taken none of the drug. The patient reported by him presented the malarial parasite in the blood before the attack. This was a typical case of the disease, and quinine was administered with marked improvement of the symptoms, the patient recovering. He makes the point that in Koch's cases, and others that have been reported, the parasite is not looked for before the development of the hemoglobinuria.—*Medicine*.

Bromidia in the treatment of Epilepsy.

The New Albany Medical Journal for November, 1898, contains an article on "Epilepsy treated by the use of Bromidia," by T. Edward Converse, M. D., of Louisville, Ky., which, after discussing the use of medicines chiefly relied upon in the treatment of that disease, and giving the needful hygienic measures in considerable detail, concludes by referring to "the question often raised: How long will the patient have to keep up the treatment?" If the bromides are given, they should be continued for at least two years after the last convulsion, or if combined with the chloral hydrate in the form of bromidia, a year and a half is sufficient in most cases. If the patient is having several attacks during the day, a teaspoonful of bromidia after the attack and repeated in an hour will abort the next attack; but, as a rule, one teaspoonful will be sufficient.—*Sanatorium*, April, 1899.

Always Reliable—No Determental After-Effects.

It has been proven by clinical tests that Neurosine (Dios) is the most effective and safest hypnotic known to the profession, and whereas it contains no morphine, chloral or opium, there can be no detrimental after-effects. Always of the same consistency, therefore may be relied upon to produce the same results under similar conditions. It is only necessary for physicians to give Neurosine a trial and they will be

convinced that it is the standard remedy in the treatment of all forms of nervous disturbances. In uterine troubles it should be combined with Dioviurnia.

Dose: One teaspoonful to a tablespoonful three or more times a day, as indicated.

Peacock's Bromides.

I have prescribed Peacock's Bromides and found it to be one of the finest and most reliable remedies ever produced. Used it in my practice and found it very beneficial in cases of "Cerebro Spinal Meningitis" of the most severest attacks. It does not only help in restoring the brain functions but helps greatly in reducing fever. Will also state that Peacock's Bromides can be used in cases where "Nervous Attacks" are most readily. I will close by stating that I will still continue its use wherever it be indicated.

ROBT. E. McDONOUGH, M. D.

Louisville, Ky.

The report has been circulated that the New Orleans Polyclinic has been suspended on account of small-pox in New Orleans. This statement is absolutely false. The Polyclinic has had a continuous course since November 20, and will continue until May 12. The small-pox situation in New Orleans has at no time justified any apprehension on the part of students attending the Polyclinic or on the part of those who might wish to do so.

ISADORE DYER, M. D.

Secretary, New Orleans Polyclinic.

February 24, 1900.

Tennessee Medical Society.

The Tennessee Medical Society will meet in Knoxville, April 10, 11, and 12th, under the presidency of Dr. D. E. Nelson of Chattanooga.

Reduced railroad and hotel rates will obtain. Dr. S. R. Miller is chairman of the committee on arrangements.

I will state that I took Seng myself for stomach troubles and found it to be an excellent preparation, corrective of all dyspeptic symptoms and a builder up of the system.

D. M. BLUE, M. D.

Keysville, Fla.

Teacher—How do you account for the phenomenon of dew? Boy—Well, you see, the earth revolves on its axis every 24 hours, and in consequence of this tremendous pace it perspires freely.—*Tit-Bits*.

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THE HIGHEST TYPE OF FLUID MEDICINES.

A Novelty---In What?

In the recognition of the fact that certain drugs, containing volatile constituents upon which their therapeutic value depends, lose their medicinal properties in the process of drying, or through long or imperfect storage.

In all such cases

We use the **green or fresh root, bark or plant**, gathered especially for us when in their prime.

Some kinds are prepared fresh, Others partially or wholly dried

But all are gathered especially for our Laboratory; carefully handled and immediately prepared into Fluid Extracts. The menstruum employed is **Alcohol** selected for **strength and purity**, whereby the non-medicinal elements are rejected and the liability to deterioration avoided.

Fluid Extracts **thus prepared** are perfect representatives of the drugs from which they are made.

THEY ARE CLEAN.

THEY ARE EASILY DISPENSED.

THEY ARE SIGHTLY.

THEY ARE THERAPEUTICALLY RELIABLE.

Old, shop-worn or worm-eaten drugs, however carefully manipulated, will not yield a satisfactory product when made with weak alcohol and water, or with wood spirit as a menstruum. Is it any wonder that commercial Fluid Extracts, as a class, are termed by a leading medical writer—the “Great American Fraud?”

Watch your fluid extracts.

Merrell's Fluid Extracts from fresh, choice drugs are powerful instruments for good in the hands of the observant physician.

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The Man Who Tipped.

He tipped the man who took his hat,
The man who took his cane,
The chambermaid, the bell-boy, and
The porter on the train.

He tipped his hat to all the girls,
And he tipped to all the men;
He tipped the beam at two-fifteen,
Till tippin' made him thin.

He gave a friend a "dead-sure tip,"
And when that lost the race,
His friend let fly another tip,
Which found a stopping place.

And then he took to tipping;
Was tipsy night and day;
He tipped right and left until
His money passed away.

And now he drives an ash-cart.
And when he makes a trip,
He empties out the load so as
To give the cart a tip.

—*Criterion.*

The Relation of Pelvic Disturbances to Insanity and Crime.

Macnaughton-Jones, in his valedictory address before the British Gynecological Society (Lancet, Jan. 20, 1900), spoke of the correlation between sexual function and insanity and crime. His conclusions are as follows:

1. The correlation of insanity and disordered sexual function arising out of affections of the generative organs is a factor to be taken into consideration in the treatment of the mentally afflicted.

2. Where there is ground for the suspicion that some physical condition of the uterus or adnexa existed which might produce or aggravate the mental affection, a careful examination, under an anesthetic if necessary, should be made.

3. In the investigation of criminal acts committed by women, either during the menopause or while the menstrual function is either active or suppressed, due weight should be given to the influence exerted by its irregularity or abeyance on the mind of the woman; in doing this her previous history and temperament should be considered.

4. The special dangers of the climacteric period should be remembered, and the symptoms indicative of threatening climacteric mania, depression of spirits, attacks of hysteria, occasional hallucinations, delusions with regard to relations, unjust dislikes, unfounded apprehensions of some

grave crime committed or injury inflicted on them, and suicidal tendencies.

5. In operations on the generative organs of women there is a greater predisposition to mental disturbance than after other operative procedures.

6. Women who have been previously insane are predisposed to a relapse by the development of disease in their sexual organs, and especially to such recurrence of insanity after operation on these organs. Under all such conditions, and in the face of these warnings, the greatest supervision and care are required to anticipate the insane impulse and to prevent suicide or crime in the case of women who manifest symptoms that are due to a correlation between disorders of sexual organs and mental instability.—*Medicine.*

Diet in Typhoid Fever.

R. W. Marsden, in The Lancet of Jan. 13, 1900, records his results in dieting two hundred cases of typhoid fever. In abandoning a milk diet he does not believe that the food should be wholly unrestricted, but there should be definite rules in the diet of cases. All patients receive milk only, at first. In mild cases without contraindications the patient should be fed on successive days with custard, fish, mashed potatoes, chicken, bread and butter, and finally with minced meat, remaining on this diet until convalescence is well established. In a severe case a diet of milk and perhaps juice of meat might have to be continued well into the period of convalescence. Generally speaking, the individual patient and his condition have been alone considered; the patient's wishes in the manner of diet have constituted a most important help. Solid food is not forced upon the patients, but is only given where it is accepted cheerfully. In view of his experience in these two hundred cases he concludes that a careful system of diet has no injurious consequences. It is of benefit in that there is a more rapid recovery, diminished risk of surreptitious feeding, a less tendency to bolt food when allowed without proper mastication, and finally a marked decrease of post-typhoid anemia, gangrene, etc. He closes with the statement that there is no justification for resisting a craving appetite in the manner at present in vogue.—*Medicine.*

Pin worms about the rectum, in women, are a frequent source of pain which may resemble a good deal the pain of coccygodynia. In other instances they lead the patient to believe that some uterine disturbance exists.



6

HYDROZONE

(30 volumes preserved aqueous solution of H_2O_2)

IS THE MOST POWERFUL ANTISEPTIC AND PUS DESTROYER.
HARMLESS STIMULANT TO HEALTHY GRANULATIONS.

GLYCOZONE

(C. P. Glycerine combined with Ozone)

IS THE MOST POWERFUL HEALING
AGENT KNOWN.

These Remedies cure all Diseases caused by Germs.
Successfully used in the treatment of Chronic and Acute Ulcers
(Specific or not),

**Skin Diseases, Eczema, Psoriasis, Salt Rheum,
Itch, Barber's Itch, Poisoning Ivy, Acne, Etc.**

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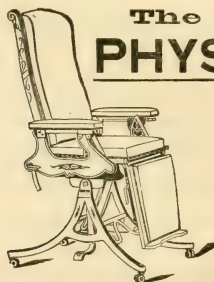


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It is a good point to remember that in practically all dislocations of the shoulder, the elbow cannot be made to touch the chest on the affected side, whereas in fracture of the neck of the humerus the patient can always accomplish this manœuvre.

The rich old man woos the mercenary young girl.

"I am," he protests finally, "a consistent Christian——"

Here the girl laughs derisively, for religion cuts no ice with her.

"Scientist," adds the old man, finishing his sentence.

It is at this point that the mercenary young girl throws herself with a glad cry upon the rich old man's neck, deeming it likely that he will die about the first time he gets sick.

The Charlotte Medical Journal.

VOL. XVI.

CHARLOTTE, N. C., APRIL, 1900.

No. 4.

Pneumo-Therapy in Diseases of the Respiratory Tract.*

By James Sawyer, M. D., Asheville, N. C.

In the beginning I wish to state that this paper is a very hurried one being unexpectedly called upon as the first essayist of the society for this year, and in consequence having too little time to prepare a really scientific paper. Hence I shall not attempt to dwell upon the history of development of Pneumo-Therapy, or the different methods of its use; but shall restrict these remarks to some personal observations on the use of compressed air as an adjuvant in the treatment of the diseases of the respiratory tract.

The great drawback to Pneumo-Therapy heretofore has been the inadequacy of the methods employed and inefficient instruments used. But this has to a large extent been remedied by the development of new methods and new instruments and by the improvement in technique. We now have serviceable apparatus for the various sprays, as well as the very excellent vaporizing, nebulizing or comminuting machines, not to mention the numerous hot air instruments and those for the direct application of steam to the respiratory mucous membrane, which do not come within the purview of this paper. The sprays and the nebulae have proved very efficacious in my hands and I place great reliance in them in the treatment of the diseases of the respiratory tract. The sprays have proven more successful as cleansers of the nasal, pharyngeal and laryngeal membranes, but the comminuter is my mainstay in treating bronchial and pulmonary affections, and is to be preferred in treating aural diseases and certain post-nasal conditions in those localities not so easily reached by the spray. But oftentimes the best results are obtained by using both the sprays and the nebulae.

I have often had occasion to notice this difference between the sprays and the nebulae. Since the patients inadvertently swallow a good deal of the oleaginous matter used in the sprays, these oily sprays frequently cause the stomach to rebel with the

consequent nausea, loss of appetite and weight and concomitant symptoms, which persist and are aggravated until the sprays are stopped: whereas no such disturbance is caused by the same medicine used in the comminuter, because of its vaporized condition. The reason for this can very readily be understood if we take into consideration the fact that the nebulae is dry and will not deposit any moisture until pressure is brought to bear, causing condensation of the vapor: which phenomenon is explained by the laws of expansion and condensation. The compressed air in the reservoir forces its way through the oily liquid causing its expansion and consequent vaporization, which process is called nebulizing, vaporizing or comminuting as the case may be. This vaporized liquid is perfectly dry, which can easily be satisfactorily proven by the following experiment: Let the nebulae from the comminuter flow freely upon the hand or a piece of metal (or a glass if you choose); there is then no appearance of moisture; but press the glass tube through which the vapor flows against the palm (or other object used) permitting only a small amount of the nebulae to escape, and you will immediately perceive on that spot a deposit of the identical liquid used. Hence in using the nebulae we have no oil to speak of in the mouth and throat to be swallowed, because of the comparatively slight amount of pressure here, but as soon as the vapor reaches the lungs where the pressure is greater there is deposited a fine coating of the nebulized solution where ever it come in contact with the mucous membrane, thus thoroughly medicating exactly the parts we wish to influence.

One cannot set down hard and fast rules for the treatment of these respiratory affections. Each must be treated on its own individual basis and according to the conditions found. Hence you will understand that the formulae herein mentioned are simply some favorites of mine in the conditions indicated, that they are not a routine treatment and that they are varied to suit the necessities of each case. I cannot attempt to go deeply into the *Materia-Medica* of Pneumo-Therapy, for that is too vast a subject to be attempted in this brief paper. But I may add that as therapeutic agents in obstinate acute cases of Rhinitis, Pharyngi-

*Read before the Buncombe County, Medical Society, January 15th, 1900.

tis and especially Laryngitis the following formulae have proved themselves to be very valuable in my hands.

R Ol Eucalypti f 3ii
 " Cedar. f 3i
 " Cassia. f 3ss
 Glymol ad f 3xvi. M.

Used as a spray in the office, followed by

R Cocaine (Alkaloid) gr. xx
 Oil of Cinnamon f 3ss
 Menthol Crystals
 Camphor Gum aa 3i
 Glymol f 3iv. M.

Used in the comminuter.

A similar though weaker solution is given the patient to use at home in a vaporizer every two to six hours as his condition requires, with very special instructions as to the manner of using the same. The patients are as far as possible kept in ignorance of the presence of Cocaine in the solution and the druggist is warned not to refill the prescription, thus guarding against causing the Cocaine habit. I never use Cocaine in this manner except for acute cases.

In chronic cases of Nasal, Post-Nasal and Pharyngeal "Catarrh" (so called) good results are obtained from the above spray, with perhaps the addition of an ethereal solution of Euophen or Iodoform, if the patients stomach will stand it, as for instance.

R Euophen (or Iodoform) 3iss
 Ether q. s. ft sol. filter et adde
 Ol Cassia. f 3ss
 Ol Cedar. f 3i
 Ol Eucalypti. f 3ii
 Glymol ad f 3xvi. M.

For office use as a spray, followed by

R Iodine (Resublimed) gr. xxx
 Oil of Eucalyptus f 3ii
 Menthol Chrystals
 Camphor Gum aa 3i
 Glymol f 3iv

M.

Used in the comminuter and given to the patient to use thrice daily at home in a nebulizer. This method with the supplementary local and general constitutional treatment necessary in the individual cases has sufficed to cure every case of "Catarrh" that it has been my fortune to treat.

I have found it a good practice to order the patient to use a warm non-irritating nasal douche to clear out the nasal passages a short time before using the vaporized medicine.

In bronchial Catarrh and more especially in Hay fever and Asthma Pneumo-Therapy is (I might almost say) the ideal treatment.

The relief that is afforded these poor sufferers is alone enough to give to Pneumo-Therapy a permanent place in the annals of medicine. And the blessings poured in upon us by those relieved constitute some of the brightest spots in the Doctor's life. It is my belief that by this means we can cure a very large percentage of all cases of bronchial asthma, and I have yet to see a single case which it did not afford almost instantaneous relief.

In Pulmonary Tuberculosis the comminuter is especially valuable, and here we expect hardly so much benefit from the medicine exhibited as from the way in which it is used. I have found the following solution to be a good one in this disease.

R Oil of Eucalyptus
 " " Cloves
 Morson's Creasote aa parts 5
 Glymol - - - - - " 50.

M.

Used in the comminuter.

This when used in a good nebulizing machine aids to soothe the irritated mucous membrane of the respiratory tract, tends to inhibit co-existing bronchitis and to disinfect the putrid sputa, reducing markedly in many instances the number of Tubercular bacilli and other bacilli present by inhibiting their growth and making the expectoration less difficult. Moreover it is pleasant to take and hence not objectionable to the patient, which is a desideratum not to be despised when there is much gastric disturbance as, unfortunately, is so frequently the case. This is the only way that I have been able to successfully use creasote without disturbing the stomach and causing that very undesirable form of indigestion which so often complicates tuberculosis, greatly increasing its mortality, for experience has taught us that the stomach (and by that I mean the digestive apparatus) is perhaps the most important organ in this disease and must be given special care and attention. Many other good solutions are used and various aims accomplished by their use in the comminuter, but that which is of prime importance is that this method causes the patient to expand the lungs, take in good deep breaths and permit pure air (or medicated air as the case may be) entrance into the collapsed air cells so long unused and hence so much the more easily diseased. I have found nothing better for the opening up of the collapsed air cells than some such oleaginous solution as that above mentioned used in Dr. Robinson's Multiple Comminuter. This, on account of its vibratory massage attachment is especially valuable in those cases of "lazy" lungs

where the patient refuses to use his lungs properly and in consequence the apices are weak, the air cells collapsed and perhaps agglutinated.

I had a patient with this condition to come to me last fall from Florida. His chest expansion was then not quite one inch, he was very weak, exceedingly short of breath so that he could take no physical exercise whatsoever, and was tubercular at both apices, especially the right. I put him on this treatment with no other medicine save a general reconstructive tonic, and at the end of six weeks his chest expansion was four and one half inches, he could walk several miles without being fatigued, and his condition was in every way improved. I have two similar cases in mind in which I used this machine and with similar though not so marked results. One of them I discharged cured January 3rd., 1900. The other got home-sick and went back to Kentucky and I have not heard of him since. I mention these cases simply to show how great a help the proper and cautious use of this instrument may be to one in the treatment of pulmonary tuberculosis, especially in the incipient stage.

In two cases of advanced tuberculosis I was enabled by Pneumo-Therapy to stop the harrassing cough even when Heroin and Codeine failed me; and in two cases in which there were quite large cavities which at times became clogged up and caused absorption of the toxic products with consequent chills and severe night sweats I was enabled to entirely relieve these distressing symptoms by keeping the passages leading to the cavities open and the cavities themselves clean by the use of the comminuter. As the night sweats ceased, the temperature also came down markedly and instead of running at 103.5 degrees F. to 104.5 degrees F. every afternoon and evening, it was reduced to between 99 degrees F. and 101 degrees F.

Having obtained such good results from my limited experience with the comminuter I now use it tentatively in all cases of pulmonary tuberculosis that come under my care and shall continue to do so until I am satisfied as to its exact indications and limitations. And I wish to urge my confreres to give to Pneumo-Therapy a fair and impartial, though very thorough, clinical test.

Please let it be distinctly understood that I am not advocating any specific all "cure-all" for tuberculosis, for we have no such thing, but I do believe that Pneumo-Therapy opens up a broad field of usefulness in the treatment of the "great white plague", and when used together with such hygienic,

dietetic and generat therapeutic measures as may seem to be useful or necessary in each individual case, will result in a larger percentage of recoveries, cures, arrests or improvements as the case may be.

DISCUSSION.

DR. J. A. BURROUGHS.—I have listened to the doctor's paper with a great deal of interest and pleasure. If there is one thing I am interested in above another it is in treating diseases of the respiratory tract. I disagree with the doctor in regard to the use of cocaine in any instance except operative. Where there is an operation to be performed in the nasal passage cocaine is admissible, otherwise, as a routine treatment, I object to it seriously. I have treated possibly 4000 cases of tuberculosis by means of pneumotherapy, that is, as an auxiliary. It is only an auxiliary in treating tubercular cases, or any disease of the air passage, let it be bronchial catarrh, asthma or pulmonary tuberculosis, but with the experience of probably 17 years in treating tubercular cases by pneumotherapy I am willing to state that under no circumstances would I take one of those unfortunate cases under my care without giving them treatment by the respiratory tract. In regard to the drugs used, I have used glymol as the base for everything. I use it from the simple fact that glymol is soothing to the parts, it is a great germicide, it is an antiseptic and it is reconstructive. It dissolves all the sputum in the bronchial tubes and even in the air cells, and it is the best base that I can get for the different medicines I used. In giving inter-pulmonary medication it is necessary to give the best of antiseptics, such as oil of cloves cinnamon, pine needles, and eucalyptus, menthol, creosote, and you cannot follow any hard fixed rules for the quantity you use. You have to prepare your dose for each patient as you give it to them. You have to fix it up as they need it. The objections I have to the nebulizer are, first, it is a routine practice; second, its pressure is insufficient, and, third, it is impossible to get a sufficient quantity of medicine in the lungs in length of time to be of therapeutic value. But enough on that point. In giving inter pulmonary medication or treating diseases of the air passages with medicines, I do this. I use a very high air pressure, an air pressure so high that it completely nebulizes, in other words it suspends the little globules of oil very finely, and is carried into the very air passages. It was for a long time thought that in giving a treatment by the respiratory tract that it never reached the air cells, but that

has long been disproved. If tubercular bacilli can find a way into the air cells it is reasonable to presume that the small particles of oil globules can find their way into the air cells and get in their anti-septic and germicidal effect.

DR. MORRIS.—Mr. President I have not much to say. I am so thoroughly positive Dr. Burroughs made a mistake when he said that small oil globules can be thrown directly into the air cells that I want to call his attention to it. I am sure Dr. Burroughs knows too much about anatomy of the lungs to make such a statement and mean it literally. As a matter of course, we cannot get anything into the air cells by that method, except what we get by transformation and diffusion. However, I think the treatment is all right,—the spray and the nebula, etc., in diseases of the respiratory tract, but I would like for Dr. Burroughs to explain how he can get the oil globules into the air cells.

DR. PEAVY.—I have one of those things, but I have not used it very much yet. It seems that the essayist and respondent have confined themselves principally to consideration of effect of drugs introduced with spray and nebulizing apparatus, and have said very little about pneumotherapy proper, the effect of air itself. It is a very interesting point. The dilating effect of the forced introduction of medicated sprays has not been touched upon. It seems to me that therein lies the greater part of the benefit derived. It strikes me that introducing any spray or nebulized material upon pressure of 30 lbs. you would get the same effect that you would get in a pneumatic cabinet, and take the pressure from around him. You destroy the equilibrium between the pressure of the air and the pressure around the body, and the current would have an increased relative pressure and of course its expansive power would be greater. But there is one point worth thinking about in connection with that, which is this. The question comes up when you come to consider the use of the pneumatic cabinet and the use of these nebulizing apparatus that this forced air will follow the open routes really. If we had a way of making it go into these collapsed areas we would have a very nice thing, but naturally it will follow the open routes, and we incur the risk and increase a dilation already existing and carry that beyond the point where any compensatory advantage accrues. That just occurs to me as something to be considered in using this forced innovation. I am very much pleased with the principle of the thing and think there is a great deal in it. The nebulizing

apparatus seems to be an ideal way of applying the medicine.

DR. C. P. AMBLER.—From the subject of the paper I expected to hear more of pneumotherapy pure and simple. Under that I expected to hear the doctor deal particularly with fresh air, hot air, cold air, or air of ordinary room, temperature, and all those different conditions that we have had advocated in times gone by. Simply placing liquids in suspension in the air and then claiming this air is absolutely dry is something new to me. How you can take a liquid of any kind and nebulize that fluid, suspend it in a certain kind of air and claim that that air is absolutely dry, when these globules, as they called, are floating in that air, is a thing which I cannot see. As we all know, humidity of the air is a relative term. Take an air of low temperature and its moisture containing capacity is very slight. As the temperature of the air is increased its moisture containing capacity is greatly increased, but in that case the moisture is present in the form of vapor and not as spray. I believe that Dr. Sawyer's experiment of vapor present in his nebulae was defective. I think it was only that the amount of air thrown against his hand contained little moisture. In treating lung cases we all use sprays, as we do in treating nose cases and throat cases. I do not believe, however, that the use of sprays and nebula, etc. in these lung cases is of great value, more than that you make application to the upper respiratory tract. I mean by that the nasal chambers, the pharynx, the larynx, the larger bronchial tubes and perhaps the small ones. In pulmonary tuberculosis how many cases do we see where there is not consolidation present, and if consolidation exists in one whole lobe for instance, or half lobe, or even a consolidation the size of a filbert, that precludes anything entering that part of the lung by the air route. One of the first things that takes place in pulmonary tuberculosis is that the air cells are destroyed. I mean that they are filled up, and whether they are destroyed and broken down in the shape of a cavity depends upon the extent to which the disease progresses, but certainly where the consolidation is present we cannot either introduce air or medicated vapors into the cells themselves, and for that reason I do not believe our sprays reaches the point we desire it. I do not believe that, if you have a lung in a state collapse, that, by using your nebulizer you can get air into that part of the lung, because as the patient breathes he is going to breathe the medicated air into the part of the lung which is open and free. He is

going to increase the expansion of his lung which is sound. If you are going to inflate a lobe in a state of collapse, you can only that under a different atmospheric pressure. I believe the only way you can do that is by putting your patient in the pneumatic cabinet. Here your patient can be made to breathe air at a relatively greater pressure than the air surrounding him. As long as the patient breathes air of the same pressure as that around him he is not going to breathe that air into a part of his lungs in a state of collapse.

DR. WATSON.—Isn't the relative resistance the same in both instances. I can't understand, because the relative strength and resistance is just the same any way, why don't the air in the cabinet follow the natural channels which are open any way.

DR. AMBLER.—With the patient in the cabinet, pressure decreased, and breathing outside air it does, but only to the full extent of the expansion of the chest. Put a patient, who has a lung capacity of 125 cubic inches outside the cabinet, in the cabinet and decrease the pressure over his chest, while he is breathing air of greater relative density and his capacity increases in proportion to the amount of pressure removed. True, the greater part of the increase in the sound portion of his lungs.

DR. WATSON.—I do not know thoroughly what the theories may be, but I know that in treating my cases of bronchial affections, I cure them with this treatment. I do not know whether the fluid goes into the air cells or where it goes, but I use the nebulizer or vaporizer, and after a treatment of probably ten days the majority of my cases get well. I mean in all affections where there is simple inflammation of the lungs, but I know also that in the bronchitis which is due to tuberculosis that we do get marked tuberculosis in that particular feature of the case, and while I was a great skeptic when Dr. Burroughs advocated this treatment some years ago, yet I have demonstrated that patients do improve under it. I do not see why it is possible to get any fluid into the air cells. I agree with Dr. Morris, because the more you compress the air cells the less likely are you to get it in there. The more pressure you put on the more dense the air becomes, and the more resistance, but somehow the treatment is all right in its practical results.

DR. FLETCHER.—I can readily see how this treatment can affect the upper air passages, and the larger and even the smaller bronchial tubes but our physiology tells us that there is a certain amount of residual air which you can force out of the lungs, and there is a certain amount of reserve air

which you cannot change at all. We all know that if the air was out of those air cells they would collapse. How this nebulizing agent is going to get in there and displace this I don't see. You might change it after awhile, to be sure. We understand that if we put a man into that atmosphere and let him breathe it he will change that reserve air after awhile, but you cannot get it in there while you are using the spray.

DR. McBRAYER.—I am of the opinion that if a physician were to throw a drachm or less of oilglobules into a man's tract that the patient would cough his head off. We all know that we have an apparatus at the opening of the larynx known as the glottis, and the cover for that opening, the epiglottis, and we also know that the mucous membrane of the larynx is sensitive to the presence of foreign matter, and I feel pretty sure that if any amount of oil globules or any other kind of liquid should be thrown into the larynx and especially into the trachea that it would produce a sense of suffocation and a terrible coughing. It was claimed at one time that this nebulized air the essayist spoke of, this vapor, would not enter the air cells of the lungs, but it has been proven that that did enter the air cells of the lungs by placing rabbits in a room in which the air was thoroughly impregnated with this nebula, and the medicine was found in the air cells of the lungs, but I have never read of any pathological investigations or any post mortem examinations that proved that the spray could enter the lungs. We all know that no matter how fine spray is, as soon as it strikes any solid object it immediately forms into liquid again, and with the guard there of the epiglottis I do not believe that the spray enters the larynx. There is one other thing I would like to say. I have not followed Dr. Burroughs' high pressure methods very closely, at least I have never seen him give it, but because a man has 90 lbs. of pressure in the air tank is no reason he is using 90 lbs. of pressure in a man's lungs. I have used thirty lbs. of pressure and then not turned on all the register, and I have found that in a majority of healthy mucous membranes a pressure of 30 lbs. will produce a hemorrhage, and I do not believe there is any membrane that will stand a pressure of 90 lbs.

DR. PEARSON.—I was very much interested in the paper and the discussion. I lost a portion of the paper by coming in late, but I agree with Dr. Ambler in not being able to see how a pressure of 40 or 60 lbs. can be forced in the collapsed portion of the lungs, into the collapsed cells, and it seems

to me that it would follow the open passages rather than go into the diseased or collapsed portions. I think in using the spray that a great deal of the vapor is condensed on the bronchial tubes and is absorbed, and it may reach it by way of absorption, but if the spray is kept for a sufficient length of time there must be absorption from this mucous membrane or the parts with which it does come into contact. When the well cells are full of air the increased pressure will force its way into the collapsed cells, unless there is consolidation or something of that sort, where it would be impossible to enter those cells. Dr. Fletcher brought up the question in regard to residual air of the lungs. It occurs to me that is a good point if we only give one or two sprays, but if we keep him for ten minutes or so it would be bound to change. I do not give the spray so strong that he cannot breathe it, but let him breathe it in. The residual air must be changed in that length of time. I think, as Dr. Burroughs has stated, that this is only an auxiliary in the treatment of tuberculosis. There is no question that it does allay the bronchial irritation and the irritation of the lungs, and I think it is taken up and absorbed, to what extent I do not know, but it certainly does get into the air cells. I do not believe though that the spray goes directly into the air cells, but I believe the medicated vapor gets there the way the air does.

DR. REYNOLDS.—To take up the question where Dr. Fletcher left off, ordinary air breathed in and out is tidal air, and residual air is forced respiration. Reserve air is the amount left in the lungs that you cannot force out by ordinary forced respiration. Take 60 or 80 lbs. of pressure and you create an increased amount of atmospheric pressure going into the lungs. You may not carry the air into the lungs with this 60 or 70 or 80 lbs. I do not think you do, but whenever you use this spray in a patient's throat that patient would be forced to expand the lungs, and it would cause a breathing that the patient will not do with the ordinary fine spray. Another point. When you use high pressure, the higher the pressure of this ordinary spray the nearer the nebulizer you get, and will expand the lungs more by this forced spray, which is a point in its favor, in my opinion. Of course the medical profession at large is greatly in favor of the pneumatic cabinet, but unless it is in very expert hands, a man who can tell the exact condition of the lungs, it is like a shotgun cocked. I know of two cases in this town where the patient was put in the pneumatic cabinet with such a pressure that he immediately had a hem-

orrhage. I say this—that the expansion of the pneumatic cabinet on the outside is bound to expand the lungs, but when you put the spray into the throat the patient does the expansion of the lungs. Nature says how long it will expand and when it will stop, but when you place them in this artificial atmosphere nature has not a thing to do with it, and that is the danger of the pneumatic cabinet.

I heard a paper read in Chicago on inter-pulmonary medication, in which it was stated that it had been proved beyond question that this nebulized air did not enter into the air cells. You put the spray just as far down into the throat as the patient will allow. I hold that the spray at that pressure is a nebulizer.

DR. WATSON.—I hold the opinion that it would be a foreign body, and the lungs would resist at once. I cannot understand how you can get this spray reduced so fine into the lungs.

DR. REYNOLDS.—Whenever you take the spray in this glymol, whether it will enter the lungs or not it will dissolve the plugs in the lung. Take a patient in the morning after he has had his ordinary cough and place him in the spray and give him thorough expansion with this oil and he will throw off twice as much as he did in the morning. I do not think it will destroy tubercular bacilli, but I do believe that those antisepsis sprays will destroy streptococci. It cleanses the lungs as far as it will go, just the same as you would wash an ulcer in ordinary surgical cases.

DR. DUSON.—So much has been said already that I will add very little. There is one point. Dr. Burroughs and others have spoken of high pressure. I can readily see how they can get all the pressure they want into the tank or the spray, but I do not see how they get that pressure into the lungs. If they close up simply the nose and the mouth that amount of pressure will go down the oesophagus, and I do not understand how they get that pressure into the lungs or anywhere else.

DR. STEVENS.—This is all very interesting to me. The rest of you have been at one end of the spray tube or nebulizer. I have spent more time at the other end. In so far as the patient is able to realize these medicines do get into the air cells, and whether or not they get into the air cells they get into the neighborhood of the diseased tissue, and in my opinion it is much better for them to be absorbed from that region than from the stomach. It is nearer the diseased area. That the system gets the effect of them is readily proven, because some of these medicines that have been

mentioned have constitutional effects that are readily noticeable if taken into the lungs, and that the lung does absorb we do not need to prove. We see it in all of our practice. The question was asked me whether the medicine could not be tasted in the sputum 24 hours afterwards. I would state hardly that long, possibly 12 or 18 hours, but the medicines remain in the lungs for a considerable time. The taste of the medicine from the mouth leaves ordinarily in an hour. It would hardly remain in the the material given up for 18 hours unless it got beyond the bronchi. I have had no experience in treating cases with this treatment.

DR. PAQUIN.—There is no question, I think, that every treatment, so far as tuberculosis is concerned, is auxiliary. This treatment is in reference to all kinds of diseases of the respiratory organs. In the first place I wish to state that I believe it is a mistake to labor under the impression that it is impossible to take down into the bronchial tubes a solid body without coughing the lungs out. Experiments have been made in Italy and France by injections of sweet oil and cinnamon oil, and the treatments have resulted in benefitting cases of tuberculosis. These solid bodies were introduced in solid form of sweet oil and cinnamon oil directly into the trachea. They claim that no cough at all results from it, no more than when the lungs are filled with matter. You have seen patients stay all night with their bronchial tubes filled with pus, and not cough till morning, so that there is no reason to suppose that the oily substance would do any worse than that. This is not the first experiment of that kind. Serum has been used that way in years past, and did not result badly. If we reason that the solid bodies would be objectionable it must be on the grounds that they irritate the throat or the passages into the trachea, and for that reason we might have a cough. As to the use of the nebulizer and the spray there is a difference, yet when we compare it to the actual size of the air vessel, as Dr. Morris called attention to, it is immensely larger, so that its effect must be by absorption. It seems to me absolutely impossible to produce any pressure whatever about five lbs. You take a tube and close your mouth on it and see how long you can stand 5 lbs. pressure. The distention of the lungs comes from the patients own efforts. He does not do it because he is forced to. I do not think there is power enough in the muscles of the chest or throat to stand more than 5 lbs. of pressure I do agree, however, that the high pressure is good for this reason—it nebulizes finer

than low pressure, and the deeper it will go and the further it will reach the tissues the better. It is impossible to believe that anything will go through a lung that is consolidated, but if you do have a nebulizing agency that has the capacity of dissolving material at high pressure, by which pressure you get a large amount of pressure into the air tubes and in proximity to the air cells, then you have as near, if not the only means of direct medication. I do not see anything else by which you can reach a diseased tissue in the lungs. I think it is impossible to have an agency which is able to kill the germs in the cavity or in the tissue of the lungs.

DR. TENNENT.—I would like to see if I understand what two or three of these gentlemen said about the collapsed air vessels. It seems, if we understand the physiology of the lungs, that when the air vessels and the minute capillaries that reach to them become collapsed, it is due to two causes. The first cause is pressure from the outside immediately surrounding the vesicle and the tube that leads to it, and the second cause is the failure of the elasticity of the tissues that form these structures. In order to dilate them after they have once become collapsed, of course you have to deal with merely physical laws. The first is to take away the pressure from the outside, and second, to bring into existence the elasticity which has been destroyed, and if I understand right Dr. Pearson and Dr. Ambler hold that the pneumatic cabinet, by simply expanding the whole bulk of the lungs, reduces the normal pressure which exists in the thoracic cavity. Of course the first thing dilated would be the tubes, and by reducing this pressure in the thoracic cavity would do away with the outside pressure, provided it had not become permanent from the pressure. If I understand, Dr. Reynolds and the others who use the spray hold that this difference in the pressure is brought about by the patients own exertion, by the effort the patient makes when the spray or nebula is introduced in the lung, by the forced expiration that precedes the effort to dislodge the foreign body. I would like to understand if that is the two different ideas in using the cabinet and relying solely on the spray.

DR. PEARSON.—I would say that it is the patients own efforts in the pneumatic cabinet as well as without. The effect of the cabinet is to take away the pressure from the chest without enabling the patient to make a greater effort at expansion and taking more air than he can when the ordinary air pressure exists.

DR. BROWNSON.—I know Dr. Sawyer

recommended the use of the nebula very highly in the treatment of asthma. I have three or four cases of asthma that call on me occasionally, and I have been wondering how to use this treatment. They cannot come to the office, and I could hardly pack up those tubes and take to the bedside, and even if I did I don't believe I would get them to breathe it.

DR. PUREFOY.—I have enjoyed the discussion very much to-night. There has been a good deal of theory and a good deal of practice. Referring to the remarks Dr. Stevens made. The doctor argues that he feels the systemic effect of certain medicines, therefore it is absorbed from the lungs. That does not necessarily follow, because that absorption might come from the pharynx. I have patients who come into the office occasionally who had drifted around. I had one there awhile ago who had taken a great deal of creosote in this way. He said his impression was that most of it went into his stomach, and I believe that myself. I believe it is practically impossible to take the spray with 20 or 30 lbs. pressure in the tank. There is not one larynx in 1000 that will stand a spray with that force for more than a fractional part of a second. If we take the nebulizer it is different. We often get the systemic effect in the stomach and it affects the appetite. I do not believe that the spray goes into the air cells. I do not believe the force is thrown into the lungs with spray with a 90 lb. pressure amounts to much. A gallon of air is just like the same quantity of water. It flows in the direction of least resistance naturally, and when that leaves the spray it meets with a great deal of resistance in the bronchial tube if it gets into the tube, and we have no means of calculating the pressure. Some of the gentlemen argues that that spray would fill the open cells first, and having filled those cells it would naturally distend the collapsed cells. That does not follow at all, for if the direction of least resistance be backwards it would follow that course through the bronchial tubes, and the effect on the collapsed portion would be the same. Just as Dr. Duson says we would have to stop all the outlets and then put on the pressure and then we would open up that collapsed portion. If we combine ourselves to pulmonary tuberculosis that is a big thing in itself, but if we get to asthma and all kinds of catarrhal affections we will have to stay here for a week. But to treat every patient with pulmonary tuberculosis with that spray is bad practice. I believe it is one of the best remedies we have, but I would examine my patient and then I would apply the remedy. If a man comes

to me in the first stage of pulmonary tuberculosis, with very little or no cough, I certainly would not persecute him with a spray, and I should expect him to get well without it rather than with it. If later that man came to me with a good deal of cough, with a laryngeal complication, I believe the spray or nebulizer might come in well. If in the latter stage, with very profuse expectoration, with a great deal of cough I believe my creosote would come into play given by the stomach, and I believe my spray and nebulizer would do that man good. I do not doubt at all that occasionally we can get the aqueous spray into the bronchial tubes, and at least a little of that will trickle down into the bronchial tubes. If that is given under high pressure, and the water nebulized, so to speak, rather than a spray, it would be possible to make that almost like inhaling steam. Take a man with a cough in the morning. If you can give that man a hot inhalation you can soften that up, and the spray does the same thing in loosening that up, but we ought to consider the case and then administer the remedy.

DR. WHITTINGTON.—I think nearly all of us are mistaken about the idea of the extent of medication of the lungs, and in proof of that I am going to give some examples from actual experience. Last summer I was eating grapes. Just about the time I went to swallow it it went into the bronchial tubes. Well I coughed that grape up pretty quick. I think the point is in the solution of the remedy. I think a great many fluids can be carried deeply into the lungs, and I think that absorption has a great deal to do with the treatment. I believe it is a good treatment on that argument alone. The point I want to suggest is this. I lived a number of years in a mining district, where the miners worked two or three hundred feet under ground, and got their lights from kerosene lamps, and I have treated them for pneumonia, and when one of these men get pneumonia or tuberculosis it is a universal fact that they cough up quantities of soot. That stays in their systems for months. I remember one man since I moved to Asheville who came here from the mining district and had very severe attack of pneumonia, and he coughed up a great deal of purulent expectoration, and in that was a great amount of that black soot. He had not worked in the mines for 12 years and had not been on the railroad or in shops, but he coughed up great quantities of this soot.

DR. BURROUGHS.—That I am a believer in intrapulmonary medication or treating

the diseases of the respiratory tract by pneumotherapy goes without saying. There has been considerable discussion whether the medicated oils enter the air cells or not. In my opinion they do, and I think the reason the gentlemen are of the opinion that medicated oils do not enter the air cells is that they have not had enough experience to demonstrate the fact that they do. You cannot teach a man to take proper treatment at once, but you must have him completely empty the lungs of all air that he can get out, and then slowly and gradually give him the treatment, press the lever of the cutoff, and he will take a deeper inspiration, and it will get down into the trachea and the larger and smaller bronchial tubes and into the air cells. There are frequently consolidated and collapsed air cells in that region, and at the first treatment you will open but few that are collapsed, and the second and third treatment you will open up a few more, and so on and on until finally the consolidated area is frequently opened up, the inflammatory material is often carried off, and you have disinfected the whole section, so that no more tissues become involved. You kill out the germs in the bronchial tubes and produce an antiseptic condition of the lungs. There is another point. Possibly I have had as much experience in pulmonary treatment as any other man in this section. In my early experiences in treating pulmonary tuberculosis I produced several miscarriages in women that I did not know were pregnant. There were absorption of these oils. I probably produced half a dozen miscarriages before I caught on to what I was doing. In men I have produced strangula, so that I have had to draw their urine off. There is this about it. in taking intra-pulmonary medication you take a deep inhalation with 80 or 90 lbs. pressure. There may not be as much pressure as that in the end of your spray you take into your lungs. Command the patient to hold it and he holds it. There is not one-twentieth of that comes out. I use at least one gallon of glymol in my office every day, and if it were not carried off in the patient's lungs, my office would be in a mess.

DR. MORRIS.—Dr. Burroughs has had much experience, but experience gentlemen, cannot supplant physiological laws and anatomical facts. This nebula that we are using is not a gas, and it cannot be proven that this coal dust of which Dr. Whittington speaks came from the lungs instead of the bronchial tubes. Intra-pulmonary medication is a good thing. We all use it. I use it first, because I get a good therapeutic effect from it; secondly,

for the physical effect. You can use this for catarrhal troubles of the nose or throat, or for hay fever or asthma, and I believe you get a good effect, but I don't believe you put this spray into the air cells. I believe in the use of this method as a valuable adjunct in the treatment of these cases, and I use it.

DR. PAQUIN.—I do not think the pressure amounts to much except it makes the nebula. You can inhale this into the lungs and exhale it and a certain amount is gone. It has gone far enough for a certain amount to be absorbed. In respect to the air cells retaining, a case of pneumonia occurs to me. It was a case in which the air cells was impregnated with stone dust. That was solid. He died from that. It got to be a solid coagulation, impossible to cough up. What I am arguing is that this dust was gathered in the air cells. A microscopic examination of that case showed that the air cells were involved.

DR. SAWYER.—In the first place Dr. Burroughs referred to the treatment with cocain altogether as routine treatment. I do not use it for routine treatment, but I simply use it in certain select acute cases. Dr. Peavy and Dr. Ambler also wondered why I did not go into pneumotherapy proper, but it is such a big subject that I could not attempt it all. I had to restrict myself to one part, and more especially the nebula, though the sprays are of use, of course. Dr. Ambler questions the fact of the dry vapor. If he will come to my office I will prove it to him. One of the best ways of getting the medicated or unmedicated air into the collapsed air cells, and we know we can get it there, is by means of the massage attachment. This is on the principle of interrupted blows. I mentioned a case here of increased expansion which illustrates that. The patient does get a good deal of that creosote Dr. Purefoy talked about down his stomach, and you have simply to stop using it as a spray, for if you do not you will have all kinds of trouble, but if you use it in the nebula it does not have the same bad result. As to the residual air, our method of using the nebulizer is to have the patient inhale the spray for 5, 10 or 15 minutes. Of course in that time the residual air must be changed. It is not done under high pressure. As to Dr. Brownson's case of asthma, we treat those cases not only at the attack but between the attacks, and if you can get them before the attack you will frequently prevent it. As to Dr. Whittington. Of course we treat all of our cases differently. We may use a routine base, as glymol, but I do not use any drug as a routine. I have my favorites. Everybody

has their preference, but we do not use them in all cases. We have to take each case on its own merits and treat it like we would any other kind of case. We must treat the patient and not the disease.

Malaria—Mosquito.

By J. A. Reagan, M. D., Weaverville, N. C.

The definition given the mosquito in 1835, by Dr. Dunglison, "a variety of the common grät," the calex pipenes of Lineus, which in some sections produce small tumors, on whatsoever part they settle and bite, attended with such a degree of itching, and inflammation, that the person can not refrain from scratching. By a frequent repetition of which he not unfrequently causes them to ulcerate, particularly if he be of a robust, full habit.

The doctor also says of "malaria, a name in Italy of an endemic intermittent which attacks people in the neighborhood of Rome and especially about the pontine marshes. The malaria of Rome is an infected atmosphere arising from the marsh-miasmata producing endemic diseases."

He further says: "We have in the United States many similar instances of malaria producing also local and endemic diseases."

What is here said, by Dr. Dunglison, shows how little was really known of malarial diseases in the United States in 1835. But now comes the main question. Does the mosquito carry this infection and communicate it to individuals, and in this way spread the disease? In answer to this we say it does, as numerous investigators have established, as we hope to be able to show. The life history of the malarial parasite was discovered by Italian observers, Gassi and Bastianelli. The investigations were made by Maj. Ross of the Indian medical service in 1897, and published in the British Medical Journal, showing that they had traced the malarial parasite in man to the mosquito.

Dr. Celli first called attention to the fact that certain insects which collectively may be called mosquitoes play an important part in the spread of infectious diseases, caused from malaria. This theory was also emphasized by the American investigators, Smith and Kilborne, and recently substantiated by Koch.

The mosquito theory of human malaria has long been discussed by some American physicians, but not generally adopted. An experiment was tried in the Hospital San Spirito recently. Two patients who had been in the hospital for several years—had

never had malarial fever—were put in an isolated room and some mosquitoes loosed in the room which were brought from malarial ponds, in four weeks malarial fever developed, and was cured with quinine, and in the blood were found the malarial parasites.

It is believed that some species of the mosquito are more dangerous, in this respect, than others, but of this there is, as yet, no settled opinion.

The former editor of the Journal of the American Medical Association says: "The experiments of Ross in India, of Grassi and Bignami in Italy, seems to have proved that the mosquito is the chief, if not the sole, agent in the spread of malaria, the most widely prevalent, and probably the most seriously disabling, disease of man," hence all in malarial sections would do well to be extremely sensitive about being bitten by the mosquito.

Dr. Carl Proegler says: "Malaria, one of the prevalent diseases in some localities, has been proven to be a disease caused by the plasmodium malaria, which in turn is caused by certain species of mosquito."

The mosquito is bred, not in running water, but in malarial swamps and bayous where malaria is in abundance. When they first see the light they are floating on the surface of the pond, on the thin shell which contained the embryo, waiting to dry so they can fly, so if anything can be fully impregnated with anything they are with malaria.

The fly and other pest have been regarded as carriers of infectious diseases, while of late it has been demonstrated that the mosquito, in malarial sections, are more guilty than they all.

In February, 1893, Dr. A. F. A. King, in a paper read before the Philosophical Society in Washington City, D. C., clearly demonstrated the fact that the mosquito carried the malarial infection, and in this way spread the disease.

From the testimony of careful Investigators, and from known facts that certain kinds of mosquitoes are born in, and mostly confined to, malarial sections, we must contend that they are carriers of malaria into the houses of malarial section, and in this way spread the disease, wherever go. Being fully impregnated with the malaria where their bills enter they deposit the germs and the person receiving the bite soon experiences the effect, unless nature is sufficiently strong to throw it off. The reason there is no malaria in certain mountain sections of the country is that there are no stagnant malarial ponds to produce it,

and breed the malarial mosquito to carry it into the houses.

The Liverpool School of Tropical Medicine has sent an expedition to Sierra Leon, Africa, the object being to exterminate from a small area the malaria-bearing mosquitoes which infect some parts of that region. This expedition is composed of the most learned and scientific men belonging to the school, headed by Maj. Donald Ross, Lecturer on Tropical Medicine in the University College, Liverpool.

These efforts show the growing interest manifested by learned and scientific men in the medical profession, and their belief in the mosquito being the main cause of the spread of malarial diseases.

Dr. Lewis, Secretary of the Board of Health of North Carolina, some years ago, published in the N. C. Bulletin his belief in bad drinking water being the cause of the spread of malarial fever, but has now changed his mind and puts its spread on the mosquito. He says: "For some time we have regarded Mason's theory of the transmission of malaria by the mosquito as the most satisfactory theory yet enumerated, and in view of the positive demonstration of the transmission of splenic fever in cattle—a disease very closely allied to malarial disease in the human being—as decidedly the most probable. To our mind it meets the conditions more fully than any other theory."

After the Secretary's N. C. Bulletin claiming water as the cause of malaria, we wrote a short article stating if his theory was correct he ought to change the name, and instead of malaria (bad air) call it mal-aquæ (bad water). Now we can call it mal-mosquito, but as we all understand what is meant by malaria, even if we do not know what it is, we had better hold on to the old name, acknowledging it is *sui generis*.

At a meeting of the Buncombe County Medical Society some months ago, Dr. Jordan, who was a surgeon in the late American-Spanish war, read a most excellent paper on Typhoid Fever in the Army. He spoke of the fly as being more numerous than he had ever seen. That there were flies in the tents, in the streets and every where, and that they had been one means of propagating the disease.

In the discussion that followed, we said not only does the fly help spread disease, but that the mosquito spreads malarial diseases. Our worthy president said in reply that he believed the fly had that power, but he denied emphatically that the mosquito ever spread malaria or any other disease. He said the female mosquito was harmless,

and eulogized her innocence to such an extent that we almost felt that we would like to be bitten by one.

Now, Dr. Lewis says: "The female mosquito, which is the one that sings, and in whose body the plasmodium malaria, which is now generally accepted as the germ of the disease, is found."

We leave the president and secretary to decide the innocence or guilt of the female mosquito and still register our belief in the guilt of the mosquito without naming the sex, and have no desire to microscopically determine which sex is guilty.

Prof. Koch announces as the result of his studies in India "that man is the only host of the malarial parasite during the months from summer to summer. The alternating host, the mosquito, he found all the year around, but only during the summer months does the parasites find in its body the warmth necessary for its development. When summer arrives the mosquito draws the parasite from one person and transfers it to others, thus transmitting infection, and in this way an epidemic of malaria is produced."

The early theory was that the malaria was in the air, and if persons closed their doors at sundown, and did not open them until sun up, they would be free from fever. This idea of closing the door is not a bad one, as mosquitoes are known to be worse at night than in the day, so the present theory may give the same advice.

There are many new theories and discoveries made now-a-days that were advocated centuries ago, and had been forgotten until some ancient book has been taken up, principally to see the ignorance of past ages, and lo! in it is found among the so-called rubbish, some gem of richness. So in the close of the Nineteenth Century, while we have made the new discovery that the mosquito is the main factor in the spread of malaria, while we rejoice in the great advance in our science and knowledge we only have to turn back nineteen hundred years, and there find that then a Roman writer advocates the transmission of malaria by the mosquito, and then Linne and Sir Henry Holland received the transmission of malarial fever through the bite of the mosquito favorably. In 1807 Crawford, in Popular Science, published a paper on the mosquito origin of malarial fever, but it was left for the close of this century to scientifically investigate and determine what these writers had given as their opinions, and to settle it so that we can prove it by the truth having been settled by scientific investigation. While the old adage is

"beware of dogs," we can truthfully say, beware of mosquitoes.

Fermentative Disorders of the Alimentary Tract of Infants.*

By L. G. Frazier, M. D., Port Norfolk, Va.

The months of July, August* and September, bring graver troubles among the little ones than any other season of the year. During these months there is much digestive disturbance among infants. The delicate organism is very susceptible to both internal and external agencies.

We have all been duly impressed with the fact that some fermentative principle was at the bottom of almost all of the intestinal troubles among children from six months to two years old; and that many of the intestinal troubles of larger growths and also of adults, could properly be traced to some cause due to some fermentative disorder of the alimentary tract.

Under the head of diseases that are caused by fermentation in the alimentary canal, cholera infantum is one of the most common. In the majority of cases the trouble lies in the primary digestion or assimilation of the food. The exciting cause is, no doubt, due to an acid fermentation of the food, causing the excessive development of micro-organisms, either before, during or after digestion. Dentition has been considered by many writers to be a prime factor in producing these alimentary disturbances, by deranging the digestive system. From my own experience I believe it to be a secondary condition. It is true that dentition influences and aggravates the existing bowel troubles, and in some instances may give rise to these troubles.

Some of the etiological factors we find more or less associated with fermentative disorders of the alimentary canal of infants are:

1. Bad sanitary surroundings, impure water, uncleanness, filth of all kinds, such as decaying organic matter, filthy stables, and stagnant water, cess-pools, over-crowded tenement houses, with obstructed sewers and neglected ventilation.

Among the poor, who occupy crowded apartments, where the streets are extremely narrow and filthy, and the water is scanty, oftentimes contaminated with putrescent organic matter, we find much of this trouble existing.

2. The extreme heat of summer. As long as the atmospheric temperature is mild, these intestinal disorders are moderate, but with a rise of temperature, during the hot months, we often find that children, who a few hours ago were well and healthy, will have all the positive symptoms of cholera infantum or ileo-colitis.

3. Improper diet and feeding are always a favorable cause of these disorders, or fermentative disorders. Not one mother in a hundred understands the art of properly feeding babies. They let them take all they will from the breast or bottle into their stomachs, consequently they take in far more than they can assimilate or digest. During the hot months a child is more than apt to be fretful, peevish, and cross, especially if teething, and to quiet it the average mother will give it the breast or bottle just as often as it will take it. The little one will often take it for no other purpose than to rub and press the congested gums against the nipple. Yet by this means the child takes an over-amount of milk into its stomach—more than can possibly be digested—consequently the milk undergoes fermentation and putrefactive changes, producing auto-infection. On the other hand a great many children suffer from insufficient feeding, the quality of the food is poor and the quantity not sufficient.

4. Dentition has been spoken of and I will not consume space just here for a repetition.

Pure water, fresh air, and plenty of sunlight, (and I mean by sun-light, out-door exercise), and most important of all, proper feeding, are prime factors in treating babies, who are continually sick and disturbed by some fermentative disorder of the alimentary canal.

Again, children often suffer from thirst. The little ones get thirsty just as we do. I do not believe in withholding water from them. Give them plenty of water, and water that has been purified or previously boiled. Bottle-fed babies should always be given milk that has been boiled, with a little water and sugar added. If there is the slightest symptom of indigestion add a few grains of pure scale pepsin.

As to the therapeutic treatment of these so-called alimentary disorders, due to fermentation of food in the canal, first evacuate the stomach and bowels of the matter that has undergone fermentation and putrefactive changes, as quickly as possible, and fortunately for the little ones, nature has often done this part of the treatment in the way of emesis, before the physician sees the patient.

The following drugs given in proper

*Read before the Tri-State Medical Association of the Carolinas and Virginia, held at Charleston, S. C., February 20, 21, 22, 1900.

doses, answers my purpose: Bismuth subnit., mist. cretæ, syr. rhei. amm. In stubborn cases nitrate of silver; also tonic acid is used. Camph. tr. opii to relieve pain. I have gotten some good results from the use of papine to relieve pain. Borolyptol and listerin acts splendidly as antiseptics in those cases. External applications, such as warm poultices, often times relieves the pain without the aid of opiates, and should be used in preference.

Many other things I might mention in connection with the treatment, such as rectal injections, sponging, and inunctions, but not wishing to bore you with a lengthy paper, I leave the subject with you, trusting I have spoken some word worthy of your thought.

Treatment of Endometritis.

By J. D. Smith. M. D., Paducah, Ky.

I have just been reading an article on endometritis and discussions thereon, from Dr. W. P. Whittington, of Asheville, N. C., beginning on the first page of your January number.

There is much that is suggestive in it which reminds me of the confusion I labored under on this subject prior to about three years ago.

I then asked myself the question, why not treat inflamed mucous surfaces, of every kind and character, and in every locality, on the same principles that surgeons now treat all traumatisms—render them aseptic and then depend mainly upon the reparative powers of the system for results?

Glancing over the long list of remedies recommended by the profession, and previously used by myself in these affections, including those of the ear, nose, mouth, throat, vagina, uterus, urethra, etc., etc., I came to the conclusion that their relative merits, curette and all, depended, more or less, and with some mainly, on their antiseptic virtues; and that if a powerful antiseptic or germicide could be obtained which would not irritate or endanger mucous surfaces by its caustic properties on the one hand, nor endanger the general system by its poisonous qualities when freely absorbed on the other hand, that the treatment of this very large class of diseases might be greatly simplified and much improved.

But the next thing was to get the ideal germicide—one powerful enough to meet the demands of all septic surfaces or tissues, and yet sufficiently free from caustic properties as to not damage such surfaces or tissues; and also sufficiently free from

poisonous qualities as to not damage or endanger the system when freely absorbed or taken into the stomach.

At this point I began a series of experiments extending over eighteen months and resulting in the development of a process by which a compound gas, or combination of gasses, generated by the destructive distillation of carbon, boron, and sulphur, together with other chemicals, is forced into distilled water and made the basis of an antiseptic which has served me all the purposes of the ideal germicide desired.

This accomplished, my new treatment of diseases of the genital tract took definite shape, and in results has been as gratifying as ever has been the surgeon's antiseptic treatment of septic traumatisms, or aseptic treatment of aseptic incisions.

With perfect safety and most gratifying results the septic uterus, after parturition, miscarriage or abortion, is thoroughly washed out with the fluid, from half to full strength, every 8, 12 or 24 hours, and all further decomposition, odor or systemic infection prevented.

In endometritis, acute or chronic, specific or non-specific, cervical, corporeal, or both together, the diseased tract is thoroughly cleansed and rendered aseptic by the repeated introduction of slender uterine dressing forceps carrying bits of absorbent cotton wet in the fluid and so held in the forceps as to project the points so as to protect the fundus, and made to swab out the cavity.

If either the external or internal os is too much contracted to admit of the operation, moderate dilatation, with a small uterine dilator, is resorted to. And in all cases of super-sensitiveness of the tract a small amount of cocaine is added to the fluid used.

After thus cleansing and disinfecting the uterine tract, and cleansing the vagina also if necessary, a tampon of absorbent cotton with a string attached for easy withdrawal, is wet in the fluid and placed in the vagina with upper part well up behind the cervix, and allowed to remain from 12 to 24 hours. After withdrawal the vagina is douched with hot water followed by injections of the fluid, half strength, once or twice a day.

The intervals between swabbing out the uterine tract is from one to five days, or more, according to its condition. In gonorrhea I repeat it every day in order to prevent developing gonococci from entering the fallopian tubes and gaining access to the abdominal cavity.

In non-specific endometritis I allow from three to five days to intervene, and in some mild cases even longer. I now invariably

combine or follow uterine dilatation for dysmenorrhea with this form of treatment in order to prevent the mild uterine catarrh that so often follows the operation.

The solvent and cleansing properties of the fluid are such that I now have no further use for suction pumps or other force for the removal of the tenacious glandular secretion that so frequently and inconveniently blocks up the cervical canal.

In vaginitis alone, a rare condition however, I depend on injections of the fluid in simple cases, but use the cotton tampon in cases attended with hyperplasia of the vaginal wall. I find the latter to be an excellent method also in the dry yet foul vagina of a prostitute who has had gonorrhea a number of times. It restores the normal secretion and removes the supersensitiveness of the parts as nothing else has ever done under my direction.

In vulvitis I have the fluid injected into the vagina and applied to the vulva by means of absorbent cotton, and in no case, whether simple or attended with pruritis, has it failed to give speedy relief.

I have thus outlined a plan of treatment for a class of diseases, conducted solely with an antiseptic remedy, on a purely antiseptic or germicidal theory, founded upon the universal experience of modern surgeons.

The only difference is that, in the one case we have trauma from violence and in the other case we have trauma, oftenest without violence.

But what would be thought of the surgeon who used nothing but his asepsis or his antiseptics? He would be a nullity, and so would be the gynecologist.

Therefore, if a part of the placenta or membranes remain in the parturient uterus it were criminal not to remove it, and also in retentions following abortions. Such procedure constitutes a part of the antiseptic treatment just as the removal of a decomposing slough constitutes a part of the surgeon's antiseptic treatment.

If there is a granular condition of the endometrium that the mildly stimulating and astringent effects of a well chosen antiseptic will not overcome the curette becomes a part of the antiseptic treatment just as does the surgeon's knife. If after the ordinary case of endometritis has been mainly cured there remains a few enlarged follicles around the external os, or a few enlarged capillary blood vessels within it, a light touch now and then of nitric acid becomes a part of the antiseptic treatment just as do caustics in the hands of the surgeon.

If in connection with endometritis we have areola-hyperplasia of the uterine wall, the resolvent effect of the chemical action

set up in the surrounding tissues by the negative pole of a galvanic battery when introduced into the uterine tract becomes a part, and a valuable part, of the antiseptic treatment.

But the conditions here named are not simple inflammations constituting simply metritis, but secondary results of inflammation which results have placed the parts beyond the reparative powers of the system. Overcome these secondary conditions and as in surgery so in these diseases all that is necessary locally is antiseptics. Of course the better the system is toned up the more vigorous the reparative powers.

Genital Hemorrhage.*

By Wilmer Krusen, M. D., of the Gynecological Staff of St. Joseph's Hospital, Philadelphia and Instructor in Gynecology in Jefferson Medical College, Philadelphia.

It seems very much like carrying coals to Newcastle to discuss such a trite subject as this to an audience so familiar with the theme; but having found the classification of genital hemorrhage herein given of use in my own work, I present it hoping it may render difficult diagnosis easier in the practice of others. In a paper of this length it will be impossible to do more than indicate the various etiologic factors of pathologic discharges of blood from the genitalia, without attempting to give complete diagnostic data or to suggest methods of treatment. Since the time that Mother Eve first began dressmaking and elaborated the figleaf apron until the present era, the subject of hemorrhage from the genital tract has been of vital interest to woman and to the profession that guards the sacred jewel of woman's health.

Pliny, the great Roman Naturalist who perished amid the molten lava of Vesuvius, says of the menstrual function, "there is nothing more monstrous than the menstrual fluid. Wine turns sour in its presence; seeds when touched with it lose their generative faculty; hedges die; and seeds planted in a garden where it falls, are burned up in the ground. If a woman with the menses sits upon a tree, its fruit falls. Mirrors lose their polish, knives their edges and ivory its brightness by contact with it. Bees perish in their hives, and brass and iron are seized with sudden rust, and acquire a horrid odor if touched with the

*Read at a meeting of the Associated Physicians and Surgeons of the Charity Hospital, Philadelphia, January 6, 1900.

fluid," and so on giving the impression which prevailed among a polished people about natural discharge which is an indispensable attribute of the healthful portion of the sex. Indeed, it almost seems that many present-day physicians have veritably inherited this superstitious repugnance and are afraid to make the indicated and necessary physical examination of a patient suffering from prolonged menstruation, menorrhagia, or metrorrhagia. It is a species of professional mysophobia which entails suffering and often death upon the poor woman who have entrusted their health into their professional care.

Hyrthl, the Viennese anatomist, discoursing upon the physiology of excretion, observers: "These functions from foolish expectoration to natural defecation, and revolting; therefore, despite their indispenableness, few persons excepting physicians and patients speak of them. The grateful impression which the beholding of a beautifully developed human forms tends to make upon one is lost immediately one connects the form in fancy with excretion. Think of Zeus Olympus upon the cloud throne, in his hand a cuspidor replacing the thunderbolt; of sweeteyed Juno blowing her nose; of a belching Ganymede: of Adonis surrounded with expelled intestinal gas; of a sweating Vulcan; of Achilles wrestling with a hard, unyielding stool; of a sleeping Endymion cum profluvia semines nocturno; of a laboring Pallas Athenae with flabby, pendulous paunch; of a virgin Queen of the night in parturient bed with streaming lochia; of Venus Anadyomene with shame parts bestreaked with menstrual discharge. It were more esthetic, perhaps, had these functions been left apart from the make-up of God's image; but their creation came to pass and we have no other recourse but to thank Him, if they continue to operate in healthful harmony.

But enough of sentiment and mythologic allusion,—yet drear indeed would be this life and dull this plodding work of ours, were it not so often touched and illumined by sentiment. without it we would be mere hewers of bone and drawers of urine, carpenters and butchers, simply mechanics. With it our work becomes easy and delightful, we are the trusted confidants and truest friends of the patients who honor us with their confidence. For convenience of classification we may consider those causes first which produce hemorrhage during the nonpregnant period; second, those during pregnancy. Many constitutional diseases have as a symptom increased hemorrhagic discharge; for example, a woman of the hemorrhagic diathesis bleeds much more

profusely at her menstrual epoch than any other woman. Besides hemophilia scorbutus and purpura act in this way, and although chlorosis tends rather to produce a condition of amenorrhea with leucorrhoea, yet in some cases it leads to menorrhagia and metrorrhagia. Other general causes dispose to general bleeding such as long-continued mental depression; hysteria and other mental disturbances; deranged states of the system due too luxurious and too sedentary habits of life; resistance in tropical climates or in a damp, unhealthy situations; malaria; tubercle; the acute exanthem, or uterine epistaxis associated with typhoid fever; lead and arsenic poisoning, and Bright's disease. Although disorders of circulation may produce hemorrhage, we may gradually suspect a predisposing local condition in a diseased state of the uterine mucous membrane.

Puberty is an interesting period in the life of the young girl; it is the springtime of female life, the bud unfolding into the flower. She enters into a new life and has new thoughts, desires and emotions. Any hemorrhage prior to this time is rare unless it be due to traumatism, such as falling upon some pointed object: or when the innocent virgin is the victim of man's rapacious lust. Precocious menstruation may occur. One case was recorded by Campbell in which a girl had menstruated every three weeks since birth. In many of these cases the general and sexual development is premature; the pubis becomes covered with hair, the mammae enlarge, and both the internal and external organs of generation undergo rapid development. Many cases may be cited of premature menstruation, but these belong to the anomalies and curiosities of medicine. When menorrhagia or metrorrhagia occurs during the period of fertility, it may be due to pelvic hyperemia produced by excessive indulgence in coition. The local irritation of the first sexual act and the consequent hymeneal laceration often produces an abnormal flow of blood. Prolonged laceration acts by lowering the general tone of the system and the line between merely a congestion and active inflammation changes is readily overstepped. Uterine fibroids are a very frequent cause of hemorrhage. If, as has been estimated, one-fifth of all women over 35 years of age have fibromata, the cause is one of the most frequent. In fibroid tumors there is no relation between the size of the neoplasm and the amount of hemorrhage, but there is a direct relation between the position of the growth and the amount of blood lost, tumors of the submucous type producing more hemorrhage

than those of the interstitial or subserous varieties. Tiny polyps are often the cause of profuse and dangerous metrorrhagia while a mural growth the size of the pregnant uterus at term, may cause only a slight increase in the normal menstrual flow.

Malpositions of the uterus, particularly flexions and prolapsus, are among the commonest causes of metrorrhagia; this may be due to the associated endometritis which is produced by the displacement; or to the retention, temporarily, of blood in the uterus which causes a distension and an increase in the secreting surface. Ovarian tumors have a direct influence although it is not so marked as in uterine growths. Tumors and cysts in the broad ligament find a place among the causes of congestive hemorrhage, because they act by interference with the circulation and with the normal position of the uterus. Hemorrhagic endometritis characterized by the development of villous growths of the endometrium, sometimes produces profuse hemorrhage and often stimulates primary malignant disease of the fundus uteri. The value of diagnostic curettage in determining the diagnosis in these cases cannot be overestimated.

Cancer of the cervix and the body of the uterus, tubercular diseases and other ulcerations produce hemorrhage, in a great measure because of the changes they effect in the mucous membrane, such as erosion of it; and, later, implication of the superficial and, sometimes, of the deeper blood-vessels. The early recognition of carcinoma of the uterus is absolutely essential to its successful treatment. Unfortunately we have no pathognomonic signs of this dread disease. It is frightfully prevalent and the results of treatment mournfully unsatisfactory. Its onset is so insidious that eternal vigilance is the price of its diagnosis. To aid in the early diagnosis of this dread disease the following points may be of value, although all may not be applicable to every case.

1. The unusual friability and vascularity of the tissue, which, if not detected by the finger, may easily be made apparent by hooking a tenaculum into the suspected area. The tenaculum will immediately tear out and cause abundant bleeding from the carcinomatous tissue.

2. A close adhesion of the mucous membrane of the portio to the parenchyma.

3. The difficulty in cervical dilatation as evidenced by the introduction of a tent. In a cancerous process there is, as a rule, a continuance of the hardness after dilatation.

4. Bleeding is easily provoked by an

examination or by any unusual exertion or manipulation.

5. The characteristic induration of the cervix is almost imperceptible at first, but increases as the disease progresses.

6. Puncture of any suspected nodules or follicles will differentiate carcinoma from cystic follicles or distended glands.

7. Ulcerated or eroded areas which are not speedily amenable to treatment should be regarded with suspicion.

8. Any enlargement of the uterus occurring after the menopause is usually due to malignant disease.

9. An early diagnosis can only be made with absolute certainty by microscopic examination of either an excised wedge from the suspected cervix, or, in cancer of the body, of portions of the endometrium removed by curettage. The value of the examination will depend upon the experience and competency of the pathologist.

Idiopathic hemorrhage, I believe, never occurs. To classify any bleeding under this head is simply a confession of neglect or ignorance. The cause may be obscure, but rarely will it elude examination under an anesthetic, dilatation of the uterus by a laminaria tent or by the more rapid method; or a thorough study of the history of the case. The prevalent idea that the menopause should be ushered in by irregular hemorrhages and unusual flooding is responsible for much harm to womankind. The physician who quiets his patient's apprehension and alarm at these unusual phenomena by telling her it is simply "the change of life," often finds that it is a change of life from this to another world; or the woman who welcomes the tiny spot of blood upon her clothing which occurs a few years after the menopause, as the harbinger of returning youth and fertility, will often learn when too late that it is simply the precursory symptom of malignant disease. All bleeding from the genital tract after the menopause is significant and its cause should be ascertained without unnecessary delay. The routine plan of administering oxytocic drugs for excessive bleeding, without bimanual examination to ascertain the causing factor is always to be deprecated.

In considering the causes active in pregnant women, we first naturally suspect in early pregnancy that bleeding indicates threatened abortion. If it continues and uterine contractions persist the abortion becomes inevitable. In the numerous cases of incomplete abortion which come under our observation, the two great dangers are septic infection and hemorrhage; and the best invariable rule is to administer an

anesthetic, thoroughly remove all secondines, and insert an iodoform gauze drain. The "let-alone" policy in the treatment of incomplete abortion is responsible for many cases of infection and pelvic inflammation. Concealed hemorrhage is among the most dangerous complications of pregnancy. Much attention attached to the diagnosis of this condition and it is very difficult of recognition because the patient is thrown into a dangerous condition without apparent loss of blood. A rapid, weak pulse lacking in tension; shallow respiration; a clammy skin; thirst; dimness of vision and "air hunger," a restless irritability which is significant of a certain kind of shock; all these furnish an array of symptoms which should attract the attention of the physician. Placenta previa has for its most characteristic symptom hemorrhage occurring in the latter part of pregnancy or at the beginning of labor without obvious cause. The bleeding rarely occurs until the sixth or seventh month of pregnancy. By palpation the location of the placenta may sometimes be outlined. When the placenta is in front, the organ is felt as an elastic mass, the consistence of a wetted bath sponge, which keeps the examining finger off the head.

In ectopic gestation irregular bleeding occurs and often taxes the diagnostic acumen of the examiner. The two conditions most liable to be mistaken for extra uterine gestation are incomplete abortion and disease of the appendages of one side. A pyosalpinx or hydrosalpinx closely resembles early tubal pregnancy. A study of the objective signs in conjunction with the history is important. The increased size of the uterus, the mass situated at one side of that organ, the pulsation of vessels in the lateral fornix, the expulsion of the decidual cast from the uterus and the microscopic examination of it when possible, together with a history of previous sterility and unusual discomfort during this pregnancy, with cessation of menstruation, are significant of ectopic gestation. In a few cases I have observed a slight bleeding from old lacerations of the cervix, the hypermia of the pregnancy being sufficient to rupture some tiny vessel in the everted lips of the uterus and to cause anxiety least a more serious condition be present. Hydatidiform or myxomatous degeneration of the chorionic villi is an infrequent cause of bleeding during gestation and the discharge somewhat resembles that produced by sarcomatous disease of the fundus. Many other causes of slight hemorrhage might be enumerated.

Post-partum hemorrhage due to uterine

inertia is not difficult of diagnosis. The blood of blood like a tumultuous Niagara gushes from the relaxed uterus and changes the hopeful scene of the puerperal chamber from one of eager expectancy to anxious solicitude. Picture the anticipation and preparation of friends and parents, the young wife smiling through the pains of labor as she thinks of the joys of maternity, the restless and anxious father, the experienced and garrulous mother or mother-in-law with ready hand and redier tongue, the meddlesome friend "who has been there before," the child safely delivered, its first plaintive cry and its consignment to a waiting nurse or friend, then an ominous silence in the nearby bed, followed by the gush of warm blood, the fainting patient; the rapid and faltering pulse; energetic movements of the accoucheur; excitement of bystanders and frenzy of relatives; and, perhaps the dull, heavy heartache of the doctor, if he finds his efforts futile and his patient immersed in the pool of her life's blood;—a sad scene and fortunately a rare one:—for rapid, well-directed efforts will save the patient. Empty the uterus, turn out the clot, stimulate contraction, and if this fails, aid clot formation in the open sinuses and support the patient's strength, general indications for treatment familiar to you all. In concluding this somewhat rambling paper, I wish to lay especial stress upon the importance of a thorough investigation of the causes of genital hemorrhage, and to emphasize the necessity for that physical examination of the patient without which no diagnosis can be reliable.

The Employment of the Douche After Labor.

By Frank C. Hammond, M. D., Philadelphia,
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The teaching of to-day regarding the employment of the douche after labor, varies to so great an extent, that the general practitioner is at a loss to know just what is the best plan to follow.

Some colleges, and maternity hospitals, advocate the systematic employment of the douche after every case of labor. This seems to me useless and uncalled for. The results obtained in these institutions do not differ from the others.

When called to a case of labor the accoucheur should make an examination to ascertain the progress that has been made. Upon his return he may examine again, ascertaining as early as possible the position of the presenting part; as few exam-

inations as possible should be made, but as many as necessary to ascertain that the labor is progressing nicely. All examinations should be made under rigid aseptic or antiseptic precautions. No stone should be left unturned to place a parturient woman in an environment conducive to a safe delivery and normal puerperium.

Prior to delivery the external genitals should be washed with soap and water, following this with a solution of creolin, or bichloride of mercury, as a precautionary means to the entrance of infection.

If the patient has a leucorrheal discharge or gonorrhea is present or even suspected, then it is advisable to give a bichloride of mercury douche, at least twice before the child is delivered, or else an ophthalmia neonatorum may be the result.

If numerous examinations have been made, and the physician is not satisfied as to the precaution he has exercised, then after the placenta is delivered a creolin or bichloride of mercury douche may be given.

Before making a vaginal examination, the hands should be thoroughly scrubbed, using plenty of water, then they should be placed in a creolin or bichloride of mercury solution. Then anointing the examining finger with carbolyzed cosmoline, or a substitute of equal value. The labia should be separated with the other hand, the examining finger thus entering the vagina direct.

I do not recall a single case, where sepsis occurred, when the child was born prior to the arrival of the physician.

All intra-uterine manifestations should be followed by the intra-uterine douche, under antiseptic precautions. For instance, the exploration of the uterine cavity, the manual removal of an adherent placenta, after performing a version, and instrumental deliveries. For the intra-uterine douche the following solutions may be employed: Mercuric bichloride, lysol, creolin, or carbolic acid. There are numerous cases on record of poisoning following the intra-uterine mercuric douche; this can be eliminated by using sterilized water afterwards.

If after the placenta is expelled the uterus remains relaxed, and there is a great deal of oozing, a vaginal douche of hot sterilized water (with or without the administration of ergot) will often stimulate it to contraction.

On the third fourth or fifth day of the puerperium an offensive lochia may be present. This may be due to the discharge on the external genitals and immediate vicinity, coming in contact with the air. By simply washing the parts with soap and

water, the odor will disappear. It may be due to the accumulation of blood, or a decomposing blood clot within the vagina—a vaginal douche will correct it.

If there is a temperature, and proportionate increase pulse rate, it is in all probability uterine in origin, give an intra-uterine douche, repeating the next day if necessary. Should this fail to afford relief, then the uterine cavity should be explored to ascertain the cause, which may be retained membrane or placental tissue.

To conclude. The systematic employment of the douche is uncalled for.

The physician should be acquainted with the indications for douching, for upon his knowledge of these and his judgment, depend entirely when the douche should be employed.

All instruments, nozzles and syringe tips, should be sterilized prior to their insertion in the vagina or uterus.

The examining hand and fingers should receive especial attention.

Always wash the vagina prior to the introduction of an instrument into the uterus. The instrument should be introduced by sight.

If catheterization is indicated, the catheter should be sterilized each time. A glass one is preferable.

Do not trust any one excepting a trained nurse to give a vaginal douche, as puerperal sepsis is often attributable to the dirty nozzle on the "family syringe" in the hands of an inexperienced person.

Puerperal Infection.

By C. H. Long, M. D., Escanaba, Mich., Surgeon to Tracy Hospital and County Physician.

This is an infection occurring during the first four weeks after labor or abortion. An infection continuing or arising after this date is not puerperal, but an endometritis in a sub-involuted uterus. Abortion takes place from any abrasion or wound of the genital tract, the placental site always affording a convenient opportunity for infection. Infections after abortions are the same as after labor, differing only in severity according to the advancement of pregnancy: e. g. infection after an abortion at four weeks produces less septicaemia than at three months or after labor because of the smaller uterus and less active lymphatics. We can conveniently divide infection into two varieties: first, putrid, and second, septic. Either variety may be local or general. Putrid infection is due to the

chemical products of harmless bacteria known as saprophytes.

As a rule, this infection commences from the endometrium, a superficial area of slough in which the saprophytes are situated, very often mixed with other germs. Beneath this, there is an aggregation of white blood corpuscles standing as sentry, preventing the further advancement of the invading foe, the poison-producing saprophytes;—the invaders overcoming the invaded, according to strength of numbers, and vice versa. If the saprophitic organisms are able to overcome the corpuscular sentry, their poisonous products, called toxins, rapidly enter the general circulation and cause a general putrid infection, described by Prof. Duncan as *sapraemia*, the effects of which correspond in intensity to the dose of the poison. Retained clots and placental fragments are the usual causes of putrid infection.

In septic infection, the lesser degrees are caused by staphylococci, and the more virulent by streptococci. The cocci lie anywhere along the mucuous surfaces of the genital tract, and under favorable conditions enter by the lymphatics and veins, through the uterine walls, into the surrounding tissues, and even to distant parts of the body. As a rule, in the early stages of this process, the condition is a local septic endometritis, but later a general septicaemic condition possesses the patient. Adjacent to infected vessels, serum and lymph are thrown out, and in a short time, if the patient survives, we may have supuration and pus. The more virulent and rapid the infection, the less are the local manifestations. If recovery takes place without our interference, many and varied are the remaining effects:—e. g. fixation of the pelvic organs, pus tubes, phlegmasia dolens, injured heart valves, etc., the production of these conditions having been accompanied by a more or less severe type of general septicaemia. To the theorist or the inexperienced, the diagnosis can be made and treatment applied with mathematical exactness. But, alas! how different the condition as it really exists: The busy physician, ushered into the presence of his patient at any stage of the septic process, with nurses good bad and indifferent, with various surroundings, from the mansion of the rich to the hut of the pauper, feels his weakness. It is no easy task, and often utterly impossible to diagnose and treat according to bacteriological conditions. I believe it would be a grand accomplishment if every physician were able to make cultures from the inside of the uterus, and in this way, endeavor to differentiate

the various causes and apply the proper treatment in puerperal fever. Unfortunately, skilled bacteriologists are not always able to agree because of the diversity of the pathological changes. While such conditions exist, the general practitioner must continue to rely largely upon the clinical picture rather than waste valuable time in determining the exact bacteria causing the infection. He will endeavor to apply that method of treatment which will do good in all cases.

TREATMENT.—In considering the treatment, and anticipating that retained membranes or placenta have been removed with curette or forceps, I will confine myself mainly to cases already infected, omitting prophylaxis and internal remedies generally applied in strict accordance with the best modern medical authorities. A thorough disinfection of the operator's hands, instruments and materials; also the patient's external genitals and vagina. Now irrigate the uterus, using a large glass, return-flow, irrigating tube, attached to a fountain syringe filled with a quart of Thiersch's solution, followed by five or six quarts of boric or normal salt solution. If the infection is of no more than twelve hours' duration, this is all that is required, with the exception of perhaps repeating the operation. The length of time of the infection guides our mode of procedure. If the temperature is not normal in four hours, irrigate again, and pack uterus and vagina with 10% iodoform gauze. Wait twenty-four hours for a change. If the patient is better, leave gauze for twenty-four hours longer; if no improvement, remove the gauze, curette the uterus and repack. Allow this to remain forty-eight hours. If still no improvement, open the cul-de-sac, thoroughly separating the pre-uterine tissue, and fill the pelvis with strips of gauze, thus outflanking the enemy, and turning possible victory into defeat. This gauze packing is changed according to conditions. The quantity of the discharges vary, sometimes amounting to pints. Here we are advised to give enemas of salt solutions, thereby preserving the strength of our patient. We presume that the proper remedies have been administered, and everything performed for the benefit of the patient.

I feel safe in stating that if this treatment has been fearlessly and methodically pursued, we will save a class of puerperal cases which would have proven fatal. Certainly, if the germs have gotten beyond our reach, it greatly reduces the usefulness of the operation. But even if our patient dies, we have the satisfaction of consoling

ourselves with the thought that we did our duty, and our interference was not injurious.

Treatment of Tuberculosis Based Upon Results from Previous Pathological Examinations of Blood, Sputum and Urine of Patients.

By L. H. Warner, M. D., formerly Bacteriologist St. Catharine's Hospital, Brooklyn, N. Y.

From observations of a series of cases of tuberculosis which I have made, in cases which had been treated by various physicians according to their best ideas of treatment, cases which have been diagnosed by physical examinations, and cases the treatment of which was based upon results obtained from a pathological examination of the blood, sputum and urine of the patient, I have come to be convinced that the latter class of pathological examinations if continued from time to time are the best guide to help the physician and patient to a successful termination of this dreaded disease. There are many new remedies used in tubercular diseases which tend to prolong life amongst which we find physiological and biological products derived from the animal organism. The anti-toxines, anti tubercular serums and nuclein products belong amongst the latter class of products. What effect these products have upon the tubercle bacillus, or what tissue repairing function they may possess, cannot be demonstrated by experimentations upon the lower animals alone, but such experimentations must be reaffirmed by clinical results obtained from their use upon the tubercular patient. I will not dispute that were we confronted by a patient with a dry and irritable cough, profuse expectorations, temperature of 101 or more, pulse 110 or more, emaciated, no appetite, ascultation and percussion revealing a tubercular process, night sweats and hectic fever, we would be correct in making our diagnosis of tuberculosis, especially if the examination of the sputum revealed the presence of bacillus tuberculosis. The majority of practitioners if confronted with the above conditions are satisfied to place their patient on the various medications indicated in tuberculosis consisting of hygienic surroundings, special diet, tonics, cod liver oil in many instances resort to anti-tubercular serum. Their methods of treatment are followed indefinitely to be changed according to symptoms prevailing. Little,

if any, attention is paid to the pathological study of the blood of the patient at the beginning of treatment to note what effect, if any, the treatment might have upon the various blood cells, and whereby the physician might learn whether he might look for a favorable or unfavorable prognosis of the case. Why the examination of the blood should be an important factor in the treatment of tuberculosis may be learned if we recall to our memory the structure and evolution of the tubercle. The bacillus tuberculosis enters the tissue or organ and strangulates or irritates the connective tissue elements, causing proliferation of round cells, resembling epithelial cells by their abundance of protoplasm. Infiltration with leucocytes, mostly mononuclear, from the surrounding blood vessels follows, and this leucocytic infiltration represents the reaction of the vascular system to the tubercular irritation or infection. There is no need to further follow this subject, but in my belief, knowing the above facts, it is of interest and a necessity to learn the exact pathological condition of the leucocytes in the blood of a tubercular patient. If a leucocytosis is presented we must determine the percentage of the mononuclear and polynuclear forms and of myelocytes noting probable karyokinetic figures within the nucleus. We must follow the results thus obtained by an examination of the urine to learn as what extent the leucocytosis is destructive. This we learn by the amount of xanthin leases and uric acid, and we may also learn that protective substances are liberated in the urine. In tuberculosis we generally meet with hypoleucocytosis or leukopenia or a deficiency in the number of leucocytes caused by a disturbance in the distribution of leucocytes. Whichever of the above conditions confronts us, they deserve due consideration and thought prior to determining upon the treatment of the case. Modern physiology teaches us that whenever the first alarm of disease is sounded in the organism, that the leucocytes at once rush in increased numbers to resist any pathologic attack. Leucocytosis is not a diseased condition, but on the contrary it is the rallying of physiological units to the point of the attack, causing protection to the organism. By their phagocytic action the leucocytes devitalize any foreign element introduced into the organism. Ordinarily the leucocytes appear as small roundish cells, but when stimulated to activity they change their form, they elongate and force their way through the smallest and narrowest of channels. At times they break, their nuclein is absorbed by the different cell tissues of the body or

they form into one or more new leucocytes. This latter condition is a favorable one and if produced on a large scale by means of medication is of vital importance. The creation of new and active leucocytes is most desirable in the treatment not alone of tuberculosis, but in all infectious diseases. The leucocytes possess the power to wander through the blood channels at will. They will pass out of the vein channels through the vein channels through the capillary walls and will re-enter the veins. They absorb all proteids and waste matter, they attack, destroy and digest toxic germs. They possess all the fundamental properties of protoplasm, thus when they divide and the protoplasm escape into the surrounding tissue, it has the property of becoming a part of that tissue. The leucocytes supply the different cell tissues with fresh building up material in the shape of neuclein, they are the carriers and distributors of tissue pabulum. The use of the microscope is absolutely necessary along the lines of investigation in tubercular diseases, to determine as to the most efficacious medication to be employed in the treatment of this dreaded disease. The cases which I cite here were followed up by the semi-weekly examinations of the blood, urine and sputum. The treatment was regulated according to results obtained from these examinations, and I am satisfied the extra work and study has been beneficial both to the patients and myself. Good food, fresh air and other favorable conditions must accompany all treatment. If your patient feels stronger and more vigorous in the poor, cold, thin air of the mountains he should go there, if his vitality is renewed by inhalation of damp salt air he should select his abode near the sea coast. The same climate will not suit two individual tubercular patients. The physician should endeavor to find out from his patient, which surrounding seem to give him the most energy and vitality, and should direct his abode accordingly. Thus I find that some of my cases prospered near the sea shore while other recuperated aided by mountain air.

Case I.—First stage. Feb. 1899, Mifs D. age 19. Farther and mother died of phthisis, has been sick for the last few months. Cough with slight expectoration, loss of appetite. Normal weight 125 lbs. now weighs 98 lbs. Night sweats, hectic flushes.

BLOOD EXAMINATION:

Hæmoglobin, 49 per cent.
Red Cells, 2,350,000
White Cells, 7200

a number of decrepit red corpuscles, small

sized and pale poor in albumin and hæmoglobin. No nucleated red cells.

DIFFERENTIAL COUNT OF LEUCOCYTES:
Polymorphonuclear, 80 per cent.

Large lymphocytes (large and transitional) 8 per cent.

Lymphocytes (small) 9 per cent.

Eosinophiles 0 per cent.

Myelocytes 3 per cent.

EXAMINATION OF SPUTUM:

Pus cells

Bacillus tuberculosis (exceedingly numerous)

EXAMINATION OF URINE:

Color; milky

React; slightly acid

Space Grav, 1014

Albumin traces

Sugar, none

Diazo Reaction; positive.

MICROSCOPICALLY:

Ephithelial cells, pus cells, few leucocytes and red cells, free fat drops, few uric acid crystals, bacteria and few tubercle bacillus.

Patient was ordered four Protonuclein tablets two hours before meals and before retiring. This treatment was continued for 8 weeks during which time I saw the patient twice a week for the purpose of following up my blood, sputum and urine examination. The former reveals a daily increase in young and active leucocytes, a gradual increase in red cells. The amount of tubercle bacillus decreases daily and within three weeks of beginning of treatment no more bacillus is found. The urine is apparently normal. On the first week of April 1899, patient weighs 119 pounds a gain of 21 pounds, in 8 weeks cough has entirely ceased, no abnormal sounds can be heard on auscultation and percussion. Since that time, up to this day, I have seen the patient repeatedly, feels entirely well, no return of any previous symptoms.

Case II.—Second stage, Feb. 1899, Mrs. L. age 39. Parents both died of phthisis. Patient has been sick for about a year and has fairly lived on Cod Liver Oil and tonics. Appetite poor, tubercular cachexia. Severe cough and profuse expectoration. Loss of appetite, pulse 98—110, temperature always—1 to 3 degrees above normal in the evening. Hectic flushes. Normal weight 173 lbs., now weighs, 131 lbs. Tubercular deposit located in upper lobe of right lung, small cavity.

BLOOD EXAMINATION:

Hæmoglobin; 42 per cent.

Red cells;	2,600,000
White cells;	13,400

crenated and decrepit red corpuscles, poor in hemoglobin, no nucleated red cells.

DIFFERENTIAL COUNT OF LEUCOCYTES :

Polymorphonuclear;	81 per cent.
Large Lymphocytes;	9 per cent.
Lymphocytes (small)	9 per cent.
Eosinophiles	0 per cent.
Myelocytes;	1 per cent.

EXAMINATION OF SPUTUM :

Pus cells
Bacillus Tuberculosis.

EXAMINATION OF URINE.

Color; Pale straw
Reaction; acid
Sp. Grav; 1012
Albumin; traces
Sugar; none
Diazo-reaction Positive.

MICROSCOPICALLY :

Epithelial, cells, pus cells, in clusters, leucocytes, and a few red cells, uric acid crystals micrococci streptococcus, pyogenes, smegma bacillus and bacillus tuberculosis.

Patient was ordered four tablets of protonuclein before meals and before retiring. Within the first week I noticed that this patient did not show the improvement as in case I. The second and third examination of the blood also showed no such changes as were noted in case I. It then occurred to me that Protonuclein exerts its physiological action directly upon the cellular element of the blood and further more that immediately before, during or after a meal there occur profound pathological changes in the blood, and that possibly the latter condition deterred the action of Protonuclein and I at once decided to direct the patient to take the Protonuclein two hours before meals and before retiring. This caused an immediate change for the better, and subsequent experience has taught me that Protonuclein proves most efficacious if administered half ways between meals. The patient continued on this treatment for three months. After the first weeks treatment a decided change for the better was noted, not alone by physical examination, but the latter was corroborated by pathological examinations of the blood, sputum and urine. Repeated blood examinations revealed the fact that Protonuclein increased the number of white corpuscles. It is necessary to state here that the precipitated leucocytosis differed in all respects from leucocytosis as generally found. Using the hot stage for blood

examination and extending my examinations and investigations in each instance for one hour or more. I found within one hour after taking Protonuclein, that the Polynuclear leucocytes and leucocytes with karyokinetic nuclei became very active, they appeared to distend and the nuclear forms divided into three or more distinct nuclei. In due time each one of the nuclei surrounded themselves with a blastema and assumed the role, so as to say, of a rejuvenated leucocyte with full phagocytic properties. If we recall the fact that the functions of the phagocytes tends to attack and destroy bacteria, it appears very reasonable to assume that in tuberculosis they attack the tubercle bacillus. The devastated surfaces previously inhibited by the bacillus are rebuilt by the nuclein of the leucocytes. Thus by administering medication in the tuberculosis I believe we get absolute results by selecting organic products which tend to supply the leucocyte with an abundance of nuclein, more than they can ordinarily obtain from the digestive channels.

Returning to Case II.—Previously reported, it remains to be said, that the patient appeared in perfect health four months after beginning of treatment. Weight 162 pounds menses had returned, patient sleeps, and eats well, and is able to follow her daily occupation. I have seen the patient repeatedly during the winter, and although she had several attacks of slight colds, there is no indication of any tubercular disease. The above cited cases are but two out of a series of 37 cases, clinical reports of which show the value of Protonuclein in the treatment of tubercular disease. I must admit that previous short experiments with this organic product rather left me in doubt as to its therapeutic value, but I have learned that the proper administration of this remedy depends upon a close physical study of the patient as well as upon a pathological examination of the blood, sputum, urine etc. At times an examination of the stomach contents is of great value, especially if general malaise nausea, indigestion accompanys diagnosis of tuberculosis.

The Financial Side of the Practice of Medicine.*

By W. J. Weaver, M. D., Marshall, N. C.

Residing in a small town and practicing in it and its surrounding country, I have

*Read before Buncombe County Medical Society.

not been able to discover any great medical truth with which I might startle you tonight. I am very sorry I cannot do so for nothing would give me more pleasure than announcing a specific for some of our greater maladies. I might have announced my subject as the treatment or diagnosis of some of our commoner diseases and by ransacking the various text books and magazines have bored you to the very end of endurance without giving you anything new whatever. Having therefore, discovered that my experience and opportunities have not been of sufficient importance to occupy your time, I have decided to say a few words to you from a financial stand point, and if what I have to say will hasten the day of our union in this matter, even the slightest bit it will not have been said in vain.

Believing therefore, that this subject although not medical in nature, will be of interest to the society I will make no further apology for its presentation.

The object of this paper is to lament the unnatural rivalry and discord existing in the medical profession. Particularly is it lamentable when we consider the age of the profession and the customs of the country. It is a condition that serves no member of the profession, and yet costs each one much of his hard earned money.

In the first place, this is an age of organization, of combination, of trusts, and the medical profession, although one of the oldest and most honored of all professions stands alone in its unorganized state and allows itself to be swindled out of much of its dues.

Now whose fault is this? It is surely not the patients' for we could hardly expect them to organize and compel themselves to pay their doctor bills. It can be no ones fault but the physicians' and this fault is due to the lack of organization, and lack of business principle. A physician's knowledge is his capital and he should demand recompense for it, just as much as the merchant or lawyer does, for it is certainly just as essential to human existence as either law or merchandise. Man enters and leaves this world under the care of a physician, and from time to time during his stay here he is compelled to seek his advice and guidance.

This being so, why is it that so large a per cent. of physicians' bills are left unpaid? It is not because the man is too poor, for he is able to pay the merchant and lawyer. It is simply because there is a lack of business principle among physicians, more than in any other profession or trade.

For example: A man calls at your of-

fice, who was never known to pay a doctor's bill, and asks you to treat him or his family. If you treat him he will never pay you, and if you refuse him he will find some one who is not so strict, or who doesn't know him so well, who will treat him, and this doctor, whoever he may be, is the man who is at fault. Perhaps he does not know the fellow is a professional dead-beat, in which case it is not so much his fault as the fault of the whole profession for not having sufficient organization to enable them to know at least the professionals.

If he knew the fellow was bad pay, then it was his poor business principle, and he deserves what follows. Very often it is the case that we know the fellow to be, if not bad pay, at best very poor pay, and yet he persuades us to take the case. This is very poor policy, for while some are good collectors and some are bad the general rule is, the man who beats one doctor will beat another.

Now, by organization I do not mean that we should organize to point out the dead-beats only, but we should set about to find a plan to compel such patients to pay their bills. There is no more reason why each doctor in a town should be beaten by the same man than there is that each doctor should take a large dose of strychnia to see if it really does produce convulsions. And in order to compel the payment of bills, it is essential that we unitedly refuse to continue to practice for dead-beats. Of course there are cases that depend upon charity, but no one of us would refuse a worthy case of charity. Charity of itself is not burdensome, but to do a practice expecting your fees, and after much trouble and worry in trying to collect, arrive at the conclusion that though your patient is perfectly able to pay, he has no intention of doing so, is irksome.

These facts being so, why is it that the profession goes on year after year in this unsettled state making no effort to combine?

Are we all so industrious that we enjoy taking the burden and responsibility of the sick with no hope of reward? No, I think not. There are several factors which prevent this union being brought about.

In the first place, the Quack is to a large extent responsible for this non-union in the profession. The Quack, as you all know, is a fellow who is always blowing his own horn loudly and in the most brazen manner, lauding his ability and success to the sky, while with equal zeal and untiring energy, he grossly slanders the honest physicians of the neighborhood and the profession in gen-

eral as being behind the times, incompetent, and ignorant.

The under-graduate and the unlicensed have much the same method of procedure, that is they do not rest their reputation upon their merits or their successes, but by slandering the profession and praising themselves, try to put themselves upon the same plain with the regular physician.

But, you say, "What has this to do with our union or organization?" Of itself it has nothing. But indirectly it has a great deal, for in our effort to resent such slander we do not always confine ourselves to the parties in question, or perhaps I should say, we have learned the lesson so thoroughly, and know its effects so well that when we have a grudge against any of our professional brethren, we are apt to attack them in this way, and I might add that there are so many of us, have so many grudges, against so many of our brethren that the habit has become quite general.

The individual confidence in self is another factor. Each man feels his ability to deal with problems and conditions, and unless he bridles his tongue, he is apt to say things which though meant in good faith, are apt to injure the attending physician, and are always taken by him as direct efforts at slander.

Then too, self-confidence coupled with a species of quackery, "bragging," makes us represent our abilities as far above their true worth, and strange to say the whole profession has acquired this habit until each one seems bent on out bragging the rest.

This state of affairs between doctors has given rise to an unnatural rivalry which is constantly increased by the very factors which brought it about. Consequently when they disagree (as they usually do) upon any case, each one considers the other deficient to the exact extent of the difference.

This unnatural rivalry has reached such dimensions that the profession is unwilling to agree upon matters of vital interest to all. It even refuses to agree upon a plan by which it might force its dead-beats to pay their bills.

The patient soon discovers this weak point of the doctor, and especially that patient who is trying harder to avoid his bill than to pay it.

The patient knows that wherever there is much rivalry, flattery and slander will play a good part, and so he sets about to beat the doctor.

This he usually does by flattering him to death and slandering his rivals. He tells the doctor he is amazed at his wonderful skill and ability, that it is generally con-

ceded that he is the best doctor in all the country, and hints mildly or even comes out boldly and says, that the other doctors are jealous of him, and that it is only a question of time until he will have the whole practice, run his rivals out of business, and "live happily ever afterwards." Strange to say this scheme fails in fewer cases than one would imagine, and if you will follow it up you will find that the doctor on whom it fails has very few patients who do not pay promptly. Some how they know or find out that its no use to send for him unless they are going to pay. You will also find that this doctor has a good practice because no one appreciates their physician more than those who pay up promptly, and also because they know they can find him when they want him. There is no class of people so bitter towards a physician, or none who denounce him more than those who never pay him.

Those who never pay stick to one physician as long as he will work for nothing, as long as he will credit them, but when he begins to push for a settlement they try a new physician and find fault with the old one, not that he has not served them well but because they want the world to think they have paid him.

In other words those people who never pay have found out that if one physician will not treat them another will, regardless of pay, and therefore they never worry themselves to pay any one knowing that they can get a new physician next time if the old one refuses to go.

Thus it is that in the course of a few years or even months one family will owe a bill to six or eight different physicians each one of whom may be ignorant of the fact that any other physician has been in attendance.

These men are all victims of our poor organization, and so long as the profession remains in this unorganized state we may expect to do much of our work for nothing.

I have no plan to offer but could we organize, a plan would not be wanting.

DISCUSSION.

DR. JAMES SHWYER.—I can only get up and go over what we have just heard. It is certainly a most excellent paper and hits the nail on the head. I suppose we young fellows feel this matter of organization and co-operation more than the older ones, because the older ones have been at it long enough to get a little surplus, but our surplus is on the wrong side, and it keeps us hustling to make ends meet. I had no idea what sort of paper the doctor was going to read, but I would be glad if some of the old-

er men would get together and organize some plan. I can only say that the paper is too true, from my own bit of experience. They talk sweet, pay two or three times, then run up a great big bill and that ends it.

DR. C. P. AMBLER.—Our essayist began his paper with an apology, but I do not believe he needed to make any apology for it. The paper was timely, and certainly we all need to profit by it here in Asheville, I did not take it, however, that the doctor was aiming so much at an organization which would have a standard of fees as he was at something in the way of an organization which would help us in collecting those fees we had already established for ourselves. I know of no reason why a physician should not collect. I believe he should, and I further believe the reason doctors lose so many bills is that they do not make enough effort toward collecting. We have educated the people to believe that the doctor can be put off to the last one. The doctor allows that probably because he is afraid of offending his patient. I take it that if any doctor's services in a certain family are looked upon in such a light that his trying to collect a bill is going to offend that family, they would be better off in somebody else's hands. They certainly do not appreciate his services, and they are getting to the point where they are going to somebody else anyhow. I make it a point to send every patient I have a bill once a month. On the first of every month every patient I have, whether he is able to pay or not, is presented with a statement of his account to date, and he is expected to pay. Many do not, yet many of them pay in the end. If I have a poor case that is all right, his rate is made according to his ability to pay. I have many I do not charge, as most doctors have, but if a man *can* pay, that statement coming on the first of the month is simply a reminder, and shows him how his account is growing. In that way the patient does not run up a big account which he is not able to pay. If you present your bill but once a year it will be an account which staggers the patient, while if you had been presenting your statement as time went along it is only growing as he knows it, and if he is not going to be able to take care of it he will tell you, or something will happen. I believe every man should have a bill-head and on that should be stated plainly that all accounts will be rendered on the first of each month. That statement will go to many persons who, when they see that, will make some effort to settle. You may have some patients you have had for years. If you know they are good pay and don't care

to send them a statement on the first, don't send it, but if you have some who are lukewarm, or just running up a bill, that statement is going to be a good reminder. If he ignores it, the next time he comes in tell him you believe he has received your statement, and your rule is to have some understanding at the first of each month. I appreciate that it is difficult in general practice, but I do believe if the doctor in general practice would send his statements regularly he is not going to offend the better class of his patients, and he will keep in touch with them in his accounts and get his money better. I think occasionally that a doctor, as any other business man, should sue. I know it is not the custom, but where a person is able to pay and simply doesn't pay, I believe the doctor is justified, and moreover he should have the courage to sue, especially here in Asheville where we have patients who come from a distance, run up quite a bill, and suddenly leave town with their account unpaid. I think it is the duty of every physician here to see that the people, especially those from a distance, pay their bills before they leave town. My experience has been that those who leave town without paying don't pay, *and* if I have a patient with whom I run an account I always make a settlement before he leaves. I either make him give me a draft on his bank at home, or a due bill, and if he gives a draft he doesn't like his bank to know he isn't going to honor it. I have been guilty of levying on baggage and of attaching a horse and buggy in Asheville. The man was amply able to pay, and had represented that he was a man of no means, and I found out he was perfectly able to pay, and ascertaining that he was going away I simply attachen, as he ignored all my statements. I think that is a doctor's privilege, the same as that of any other business man. As the essayist has said, our capital is the knowledge or advice we give our patients. If you are not going to protect that capital it will become cheap capital among the people with whom you do business.

DR. FLETCHER.—I have practiced medicine here for ten years, and I thought I had gotten through with all the dead-beats in town. When I came here every doctor unloaded what he had on me, and it was a burden to me for years, but I am still at it. Every once in a while I have a new one. We once thought a fee bill was the correct thing. I was a little more candid and outspoken than some, and I furnished a dead-beat list. A few of the others furnished one. The rest of them got the benefit of our experience, and I never heard any more of it. I see it every day and I have watched it

for years, a man will work one doctor for awhile, and wait for a new one to come around. Here is the trouble about the dead-beat. There are plenty of doctors in every town who cannot refuse a fee. For instance, a dead-beat comes to you and says—"I have the money to pay you." They get you there and get you interested in the case, and you cannot very well refuse to throw it up then. They know how to work you. They pay you for one visit and get you to work and you do 50.00 worth of work. It is a difficult question. We have a great many floating dead-beats here, people who come from the out-side. As Dr. Weaver says, the fault of courselies with the doctor, but what the remedy is I am not prepared to say. I wish we had some way of collecting our fees. I never have seen that a doctor did wrong in suing the patient, because every man is entitled to his pay.

DR. WATSON.—I did not hear the paper, but I have maintained for a long time that we need a fee bill as a standard for collecting bills, if nothing else. I have never sued a man, but if I should sue one and go before the courts I would like to have something on which to show I would base my fees, and if it served no other purpose it would at least give us a standard of charges which we all recognize if we do not adhere to it in our practice. Many of us would adhere to it as near as we could. I would not want to be bound by any fee bill, but I think that answering that one purpose of having a standard of charges that we might go into court which would be an advantage. I did not hear the paper, consequently I am not prepared to discuss it.

DR. BROWNSON.—I never understood why our blacklist was discontinued. We decided three or four years ago to have one I believe, and this list was sent out monthly I believe, and then it dropped, but I never understood why. I was given to understand that some man on the black-list threatened to sue for blackmail, and that it was discontinued on that account, but I doubt very much whether a dead-beat who never pays his bill could threaten any doctor by saying he could sue him for giving the information broadcast that he does not pay his bills, and while a fee bill is desirable I think it more desirable still to have a black list, so that all physicians will know who will not pay.

DR. PAQUIN.—It occurs to me that this discussion is very timely indeed, and also that the blacklist is very necessary. The method of applying may seem to be dangerous. The very paper that has been read this evening passed through my head last night. The application came to me because

of an occurrence in the past week, which has not been a new one. It occurred to me then that if this Society had a by-law or constitution which would put it into executive session whenever it met, and that each man would report his names and let the others take it down then and there, that it would serve a good purpose. There are men in this town who make it a business to go from doctor to doctor. They pay a little fee for the first time and never pay any more. You have all seen them, and I think this would be one way of getting at it, not only be voluntary, but compelling members who have had such experience to give the names in, and let every man put it down, and when such men come to your office if you'd not want to practice without fee refuse them. There is no reason why the doctor should spend his time and knowledge night and day sometime, and get nothing but abuse for it. I am very glad the paper was brought out. I had made up my mind to take it up myself, but it was brought out so beautifully that I am glad the doctor selected that subject.

DR. AMBLER.—Hasn't it been the experience of every member that those who have talked and lied about him have been the patients he has sometime allowed to carry accounts on his books, and which he has never made any very great effort to collect.

DR. FLETCHER.—It costs about two dollars to take a judgment, and that is just two dollars of good money thrown after bad.

DR. AMBLER.—My idea is that if you keep after him from month to month he is going to drop from you and go to some one else, and in that way you are going to weed out that class of patients who are never going to do you any good.

DR. REYNOLDS.—My experience has been from beginning to end just the same. They call me out at one or two o'clock at night, carry me anywhere and say they will pay me, but when you send the bill they will not do it. Send a collector around and pay him for his time, and if you don't pay him he won't collect. I can't collect any bills. Of course some patients pay without presenting a bill, and others pay as soon as you present, but the majority of patients you have to ding dong to get the money, and I would rather lose my money than attempt to collect it because you can send half a mile and they will pay you fifty cents or a dollar, and you can send them fifty times again and not get a copper, but if we had a black list and every doctor stuck to it we could collect our bills, and if we want to do any charity work we can do it.

DR. MCBRAYER.—In my earlier days I

thought I was splitting the wind and I was going anywhere. I got a little tired sometimes, and one week I began to take notes. Sunday night I was called out during the night and went. Monday night some boys got into a fight and I was called and went. The boys said they had the money. I went down and fixed up the fellow's head and charged him \$5.00 and got 50 cents. Every night that week I was called out, and I was hustling, and at the end of the week I still had 50 cents for my night work, and some of my colored friends came after me on Saturday night, and I said, "Now I will charge you \$3.00; you understand that. Have you got the money?" They said, "It is right there in the house." I said, "I am not going without it", and they said it was all there and I could get it. I went. When I got there among other symptoms I asked about was the cash. He said, "I thought you were one of these hospital doctors. They work for nothing." I said, "You were mistaken this time. If you can afford to send me a lie to get me to come to you I can afford to go back without doing anything for you" and I picked up my hat and left.

DR. GLENN.—I did not get to hear the paper, but I can tell a story like I heard some of the others. About two and a half years ago I was not feeling well one evening, and a fellow came in for me to attend to his wife. I asked him if he had the money and he said yes, he had it where he could get it next morning, and I told him what my bill would be, and he said that he would come back with me to town to see that I got it. After the delivery I asked for my fee. He was standing in front of the fire-place, and he said—"I don't owe you anything." I said—"Why don't you; isn't that your wife?" "Yes." "Is that your baby?" "Yes." "Didn't I come and wait on her last night?" "Yes, but I expect my mother-in-law to pay that bill." And I haven't seen them since. I went to see another case one snowy night. The fellow telephoned me that he would pay me corn. I told him that would be all right if he would haul it in, and I went down and went to the barn with him to put up my horse, and I said—"Where is your corn?" He said he had about 2½ bushels at the house, and that was all he had. I said—"I thought you said you were going to pay me corn." He said, "I did, but I didn't say how much."

DR. WEAVER.—I find that in my part of the country the trouble is not so much with the fee—if some fellow wants to go for fifty cents where he ought to charge two dollars he can have it—but the trouble is that they will agree to pay you and per-

haps pay you for one trip and get you started, and never pay you any more. You may hound them and hound them and they will just lie to you as long as you get after them. They will say they will sell one of their mules, and if that isn't enough he will sell his wagons, and that is all you get. Once I was called to see an old lady 60 or 70 years of age, stingy as she could be, a widow who had a two or three thousand dollar farm and well fixed. She sent for me, and I had been there several times and never had been able to collect anything. She would always tell me: "I can't pay you money, but I will bring you oats or fodder or hay." Well she got sick and sent for me, and I told the boy: "If you can secure me I will go," and he said: "I will give you a mortgage on a mule if you will go on," and I said "Alright, I will fix it up here; I know what my bill will be." He said he could not do that, but he would as soon as I got there. I said all right. He went on ahead of me, as I was not ready to go then, and when I got there the mule was there but the boy was gone. I waited on the old lady, and said, "Where is Jim?" She said, "He has stepped off, and you go ahead and dose out your medicine and he will be back." I said, "My medicine is all in tablets and I can dose it out in a minute." I waited there and finally I said I had to go home, and if Jim didn't come I would go home. She said, "You won't leave me here to die." I said, "No, but I know what is the matter with you, and I will send you the medicine. Well I started off and met Jim on the way, and he said "Have you given her the medicine?" And I said no, and he said, "Well come back and I will give you the paper." Well he gave it to me and I had it registered. About the time it came due he came in to see me and said, the crops had been bad, and wanted to know if I would take 75 cents on the dollar and call it square, and I said, "No, I am going to collect that mortgage" and I sent for the mule and the mortgage was paid. There is one section in Madison in which I never have any trouble. There is another section, where I practice most, where they never pay me. I suppose I have made a hundred trips to place called Bear Creek, the first summer I started practicing, and I never got a cent for any of them. These fellows will circle round. They go from me to the other physicians there, and in the course of twelve months they come back to me and say they have tried these doctors and I am the man they want, and they have got the money, or some wheat or fodder they are going to sell and pay me. That fellow has got to

have a doctor, and if we combine and set down on this dead-beat business they will manage to pay. They are obliged to have your services, just as much as a man is obliged to have bread and meat, and if we make this rule and stick to it we will break this up. When I began to practice there was an old physician in consultation with me at a case of labor and he had to use the forceps. The fellow had told me he had the money then, and when we finished up and started I said something about the bill, and he said, "Gentlemen, I knowed I would have to tell you a lie to get you here. I haven't a cent to save my life." I lit in to cursing. The old doctor is a preacher and he backed off. That fellow is a dead-beat. He was not worth over his homestead. He was able to pay a small bill though. We educate them to this. It is no use for one physician to try to make that man pay him. The thing must be done through a union. In my country there are a lot of fellows who are not graduates and actually have the cheek of a government mule. They introduced a bill before the last legislature to grant a man a license who never had seen the inside of a medical college, and it took considerable work to defeat the bill. The thing must be done through a society. You cannot run those fellows out of practice. If I were to indict them they would run me out of the country. They would spend their whole influence. They have friends. One fellow there goes eight or ten miles and tries to charge a dollar. He will take his horse and himself and go all day and charge a dollar. A man cannot run against a thing like that and make a living. Another habit physicians get into is lying. You will find a patient from whom you cannot collect, and you will see another doctor, and say, "Doctor, by the way, did you ever collect from so and so?" "Yes, he pays me up promptly." And I know it is a lie and he knows it. You have got to unite if you are going to do anything. Unless we unite and stick to each other, and when a fellow goes to slandering or backbiting another physician set down on him, we are not going to do any good. "United we stand, divided we fall."

"Now if I were only an ostrich," began the mean man at the breakfast table as he picked up one of his wife's biscuits, "then —"

"Yes," interrupted the patient better half, "then I might get a few feathers for that old hat I've worn for three winters." — *Chicago News.*

Consumption and its Treatment.*

By E. E. Liggett, Oswego. Kansas.

No matter what opinion one holds as to the specific influence of Koch's bacillus, doubtless all now agree that other elements enter into the production of consumption. In relation to the patient these elements, or causes, are of two classes, intrinsic and extrinsic, merging into each other so imperceptibly that the line of division is not always clearly defined. Of the intrinsic causes the most important are heredity and disease, including errors of nutrition. The extrinsic causes consist mainly of general hygiene, climate and contagion.

By heredity is meant the transmission from the parent to the offspring of a peculiarity of anatomical structure ordinarily characteristic of the parent. With tall parents we expect the children to partake of these features and be tall, and where the parents are short and stout we expect similar features in the child. Exceptions may be, and are frequent, but these exceptions can be explained by a reversion of type to a former ancestry. Now characteristics of the parents able to affect the configuration of the bones and muscles of the child will also be able to affect the structure of the glands, tissues and organs. Therefore, just as we expect parents with long legs to transmit this peculiarity to their children, so may we expect parents whose lungs are "structurally weak" to transmit this peculiarity to their children. I have not had sufficient study in the dead house and the histological laboratory to define or describe, or even to recognize this condition of hereditary or structural weakness of the lungs or to differentiate it from normal lung tissue, but it must as certainly exist as it is certain that a class of individuals exist who are deficient in muscular development. It is easy to recognize the classical Hippocratic "habitus phthisicus," but it is denied that this represents anything more than an indication of present disease or a vulnerability thereto. We have not yet learned in just what this vulnerability or structural weakness of the lungs consists. But, theoretically, one might suppose it to be mainly due to a deficiency in the structures of the parenchyma, the tissues being less in amount and abnormally delicate and frail. It possibly may be in the supply or size of the nutritive blood-vessels; or in the vaso-motor nerves of one or both sets

*Although it is not truly a synonym for phthisis pulmonalis, the term consumption is used in this paper with that meaning, for the sake of brevity and convenience.

of blood-vessels; or in the arrangement or size of the air cells, or in a combination of these or other conditions. In connection with this structural peculiarity there is proportionately lessened breath capacity with a lessened chest expansion, this lessened expansion being due to the condition of the lungs and to structurally weak respiratory muscles. The individual inheriting such respiratory organs is more prone than the normal individual to disease of these organs, and we say "he is predisposed to consumption."

The diseases predisposing one to consumption are mainly those affecting the mucus lining of the bronchial tubes and bronchioles, such as measles, whooping cough and bronchitis. In my observation a pure pneumonia rarely ever predisposes to consumption and only terminates in that way when Koch's bacillus was present, although, perhaps, not active or discovered, prior to the pneumonic inflammation. Catarrh of the nose and throat may be a factor but is so much less often than the laity suppose. Diseases affecting other organs or parts of the body resulting in lowered nutrition and lessened resisting and recuperative power necessarily have an active influence. This influence seems to be more potent when the organs affected are those more particularly concerned in digestion and assimilation. No ailment more certainly or profoundly affects nutrition than does Bright's disease or cancer. Yet consumption is not a very frequent complication of either of these but is much more common in connection with stomacic maladies not in themselves nearly so depressing to nutrition as either of the others. Bearing this in mind one may be impressed with the idea that the stomach trouble, tho' first discovered, is after all the complication or even, but a symptom of the more formidable, disease affecting the lungs.

Of the extrinsic causes those suggested under the term poor general hygiene are powerful. Poorly selected or improper and scanty food; ill-ventilated sleeping and work rooms; noxious gases from defective drainage; insufficient and improper clothing; exposure to frequent and sudden changes of temperature; intemperance, etc., all have harmful influence.

Climate *per se* has no influence in the causation of consumption except as it predisposes to bronchial and other diseases that are or may be etiological factors in the case.

It is recognized that in a moist, foggy climate such of Koch's bacilli as may be present are likely to remain virulent and active longer, and therefore have more opportunity for evil than the same number would

have in a dry climate of almost constant sunshine. But the presence of these bacilli are not primarily due to the climate and should not be charged to its account. Certain climates owing to their geographical position, sunshine, temperature, etc., have greater power to purify themselves of the contagious principle of consumption than have less favored localities, but such places are so prone to become health resorts for consumptives that because of the constant importation of fresh germs the natural advantage is soon overbalanced and such a place often becomes more dangerous than an ordinary climate. This brings us to the third extrinsic cause, contagion.

A person may have structurally weak lungs; he may have measles, whooping cough, bronchitis, dyspepsia or any other disease; he may live under the most insanitary conditions and in any climate, but he does not and will not have consumption unless he has come in contact with and become infected by Koch's tubercle bacillus. Then and not till then will such an individual become a consumptive. Then after all these other things are not causes, but incidents only, are they? And Koch's bacillus is the sole and only cause, is it? Not so at all. The individual who is not affected by any of the former causes is quite likely to be able to resist and overcome any attack of the Koch bacillus, so that the bacillus alone is not able to produce the disease. But given a person affected by all or even a part of these causes, then add Koch's bacillus and consumption is almost surely the result.

The course, duration and termination of consumption are each largely governed by the etiological factors. The more causes present and the greater their potency the more violent will be the course, the shorter the duration and the more certainly fatal will be the termination. On the other hand, the fewer the causes active and the less their power the longer will be the natural duration of the disease and the greater will be the possibility of an ultimate cure of the patient. In other words, the more of these causes we can prevent or remove the more likely are we to cure our patients.

When the termination of a case of consumption is fatal the result is usually brought about by the addition of other lethal causes to the bacillary infection. Assuming the position that the tubercle bacillus is the absolutely essential element in all forms of tuberculosis, I am now in doubt as to whether or not this bacillus is of itself lethal. For instance, I believe in acute pneumonic tuberculosis it is the generally

disseminated pneumonic process, that is the direct cause of death; but, it is admitted that this pneumonic process is due to and would not have occurred but for the presence of the tubercle bacilli. In the chronic form of consumption where there are cavities, etc., the patient dies of general septic poisoning due to the presence of various pathogenic and especially pyogenic bacteria with consequent hectic fever and malnutrition. This explains the failure of antituberculin and allied remedies to cure consumption. The patient dies from mixed infection and until we have an antitoxin that will act equally and powerfully on all septic or pathogenic toxins indifferent to origin, we will fail in the serum therapy treatment of consumption. But when we do discover such a universal antitoxin we may expect to see consumption as completely controlled as smallpox has been by vaccination.

Until this advance is made in serum therapy we must do our best to cure our consumptive patients by rational and natural methods. We have no specifics and so must depend on a removal of the various causes and on a building up and development of the natural strength and vitality of our patients increasing his respiratory capacity and ability as nearly to the normal as is possible.

The extrinsic causes may all be removed, or so modified as to have little influence, but not by means of medicines. General unhygienic surroundings cannot be improved by giving their victim cod liver oil; his sleeping apartments and work room cannot be ventilated by giving him hypophosphites. You cannot overcome darkness, dampness, dirt and intemperance with maltine; nor can climate be changed by iron, quinine and strychnine; and creosote, short of a lethal dose, will not prevent contagion. Yet all these things may be accomplished almost perfectly by proper means which it is not necessary to detail here.

There remains the intrinsic causes of hereditary structural weakness of the lungs and respiratory forces, and diseases predisposing to consumption together with disturbances of nutrition. It is to these latter that our prescriptions must be directed, curing or preventing predisposing diseases and building up our patients' strength and nutrition. It is because nutrition is below par that we give cod liver oil, hypophosphites, maltine and even creosote, and they should only be given for this reason. They should never be given simply because we have diagnosed a case of consumption, but because the patient's nutrition needs their

assistance. By increasing the nutrition we also assist our patient to overcome his inherent or acquired structural weakness of the lungs. But pulmonary gymnastics will do more for him in this direction than all the drugs in the shops, or than any climate can do.

There are several methods of pulmonary gymnastics, each having some merit. The major portion of these undertake to exercise the lungs by means of certain muscular movements and calisthenics directed to the increase of general muscular power, and especially to the increase of power in the respiratory muscles. So far as this is accomplished good work has been done, but in addition to this if we can exercise or influence the parenchyma of the lungs themselves, we are doing still better. This can be accomplished by properly breathing pure air through a little apparatus* of about the size and appearance of an ordinary cigar holder.

This appliance is held like a cigar-holder between the teeth, and all respiratory efforts are to be made through it and not through the nostrils, as usual. It is so arranged that inspiration is free and unobstructed. The expiration is somewhat hindered by means of a ball valve so that not quite all the air taken in at the inspiration is expelled at the expiration. This process is repeated again and again, each time leaving a little excess of air well charged with oxygen in the lungs. By this means the lungs are well distended with pure air, but this very distension arouses into unusual activity the physiological "respiratory sense." To supply the resulting apparent need for more air the respiratory muscles make a decided effort increasing in power with each inspiration until the lungs are so full of air they will hold no more. A few minute's use of the tube result in a vigorous and natural exercise of every respiratory muscle, every air-cell ordinarily used is dilated to its fullest capacity; many air-cells not heretofore used at all are beginning to be opened up. Bronchioles previously plugged with mucus, collapsing the air cells beyond are dilated and opened with consequent resumption of function of the collapsed air cells. The parenchyma and interstitial structures are stretched and stimulated. The blood-vessels and vaso-motor nerves are stimulated to greater energy. The blood current is more active; oxygen is supplied in greater quantity and is more energetically taken up. Carbon dioxide is more

*Patented appliances made by the Howe Tube Co., of Passaic, New Jersey. Complete printed directions accompany each tube.

freely given off. The mucus secretion is re-established, the pus and debris being thereby thinned and washed out, and, of course, cough and expectoration are for a time markedly increased often to the discouragement of the patient. But the final result is salutary and is much the same in effect as the draining of an abscess.

The full air cells, the freshly developed air-cells, the re-opened air-cells, the dilated bronchioles and the increased volume of blood must have room and to supply it the pleura must stretch until the whole chest cavity is fully occupied with active lung tissue; and still there must be more room, so now the cavities, if any, are encroached upon by lung tissue, their walls are pushed inward, their contents are squeezed out into the bronchial tubes and expectorated, their lining assumes a more healthy character and in small cavities the walls finally come together, granulations occur, healing takes place and a victory is won.

Several elements have entered into this victory. One of the most important is the effect of the increased interchange of the gases of the blood. The carbon dioxide is gotten rid of and the oxygen is supplied in full amount or even in excess. With this supply of oxygen the hydrocarbons are more completely transformed into energy and tissue. Assimilation becomes more perfect, the blood is richer in nutritive qualities, the glandular structures are all favorably affected by the better blood supply, their functions are more properly performed, especially is digestion better, the strength increases and the patient positively gains in weight. The lithemic condition due to the deficient oxidation of the hydrocarbons is gone or greatly lessened and all the tissues and organs of the body partake of the improvement and well-being.

The use of the tube is not limited to positively diseased lungs, but may be very profitably used to overcome "hereditary structural weakness" of these organs. The exercise it gives them as certainly develops their capacity, strength and resisting and recuperative power as does dumb-bells, Indian clubs or the blacksmith's hammer develop the muscles of the arm. Some caution, however, is necessary, as too frequent, prolonged or other injudicious use of the tube, especially when first beginning, may result in troublesome, frequent, and therefore, annoying cough.

Hemorrhage, too, may be an unsatisfactory result of excessive early use, and it is quite possible that emphysema could be produced by unwise use of the apparatus.

Owing to the muscular efforts it induces some fatigue is to be expected and is not harmful.

The earlier the diagnosis is made and the sooner the patient is put upon the use of this tube the better his chances for recovery. It cannot be expected that for advanced cases can be cured, but there are very few whose end may not be materially postponed.

After ten years' use, both personally and with numerous patients I have no hesitancy in saying that this tube gives me more satisfaction than any other remedy or procedure I have ever used, and I believe that its more general use would be very profitable to those persons afflicted with consumption.

SUMMARY.

The causes for consumption extrinsic to the patient may all be removed by proper non-medicinal means. Those intrinsic, as predisposing disease, malnutrition, etc., should have careful medical attention, while hereditary or structural weakness of the respiratory organs including the muscles, should be, as nearly as possible, overcome by properly regulated pulmonary gymnastics. The earlier such a course of treatment is instituted the more favorable is the prospect for a return to health and usefulness.

The Effects of Alcohol in Health and Disease.

By C. Teal, M. D., Linville, Mitchell Co., N. C.

Recently in a case in a court it was said: "Alcohol is a necessity to many persons, and is recognized as a blessing by eminent physicians. It quiets the nerves and feeds the brain. Out of 10,000 public men at the National Capitol, there are not 50 who does not use liquor in some form, either at their meals, or as a beverage. It forms a portion of their daily food. They are dependent upon it, and are made sick if they do not have it."

Is there not urgent need, for the public good, to turn the search light of modern medical investigations upon such a statement through the columns of medical journals?

Commenting upon Prof. Atwater's recent experiments with alcohol at Middleton, Conn., Dr. C. A. Greene writes in the Medical Record:

"Unlike any other hydrocarbon used as a food, or as a beverage, alcohol has a peculiarly subtle effect upon the nervous system, forming a habit which becomes maniacal

and uncontrollable in character before the habitue is at all aware of it. The nervous system surely registers the abnormal impressions, no matter how carefully alcohol may be taken. Once an habitue under the control of the alcohol mania, the strongest man or woman becomes impotent to escape from the tyranny of its power. In a neighboring town, three years ago, fifteen patients were reported cured of the alcoholic habit by the Keely method of treatment; only two of these patients are sane to-day. Thirty-six years ago two of the noblest physicians commenced the use of two table-spoonfuls of the purest whiskey to induce sleep when over-worked. One gradually lost his standing and practice, and died, filling a drunkard's grave; the other lingers yet a hopeless and helpless alcohol habitue. Alcohol and its derivatives are too thoughtlessly used and too carelessly prescribed by our profession, with which, more than any other class of persons, lies the possibility of preventing the alcohol disease."

It has been observed that in the habitual users of beer, for two or three years, there was nothing remarkably noted. Apparently in health, robust, full muscle, a fair outside, increasing in weight, with florid faces, then might come some acute disease, a cold, or a sniff of malaria, with almost invariably typhoid symptoms, violent action, which in ten days or less ended it. It was as if the system had been kept fair outside, while within it was eaten to a shell; at the first touch of disease there was utter collapse; every fibre was poisoned and weak.

What is called fermentation is caused by the increase of a like animal cell, or microbe, which used to be called the yeast plant. It is not a plant, as once believed, for it feeds only on a vegetable substance, namely, grape or fruit sugar, called glucose, and in so doing gives off carbonic acid gas, and an *excrement*, which is a substance wholly devitalized by the living process of the living animal, much as ashes result from the burning of wood in a stove. This *excretion* of this fruit sugar eating animal is *alcohol*.

In fermented liquors, like wine, cider, etc., the amount of alcohol is not above 15 per cent., while in brandy and distilled liquors it is about 50 per cent. But why only 15 per cent.? The reason is that alcohol is so deadly a poison to all living animal cells and tissues, that when it reaches 15 per cent. it kills the yeast animal that excretes it, and the fermentation stops. What alcohol does to the cell that produced it, it does to all animal cells and tissues; it

is death to them to the extent used. No living thing can exist on it an instant.

When alcohol is taken it never gets further down the animal canal than the stomach. The pylorus utterly refuses to let it pass into the lower intestines. Therefore the stomach has to extrude the alcohol through its coats into the blood, so that it may be carried out of the system by the skin, the lungs and the kidneys. Until this extrusion takes place, alcohol simply plays destruction in the human system in every organ through which it passes, in proportion to amount used. It excites the stomach and if used in quantity for a long time destroys that organ by inflammation, literally burning it up. It burns the life-carrying corpuscles of the blood, making its serum thin, a watery and useless fluid. It inflames the liver, until finally it becomes a "hob-nail" of sores. It inflames the kidneys so that Bright's disease is liable to ensue at the least provocation. It inflames the lungs so that pneumonia is invited, and is generally fatal. The skin becomes inflamed, dirty, congested and diseased. Not an organ of the body but cries out, "*I am poisoned*;" and by its inflammation shows its frantic efforts to get rid of the destroying corrosive that turns its very life into inflammatory disease.

But the most terrible consequences are in the brain. The outer portion of the brain is composed of gray matter made up of little cells, whose action is our life. When in the blood, alcohol is carried by it directly to these gray cells, for they are constantly fed by the blood, which brings the nourishing elements to these cells. Suppose the blood in addition to its nourishment, brings alcohol with it, the composition of the gray cells will show its effects. They are composed chiefly of "the oleo-palmitate of the glycerol-glacial phosphate of the obeline," which is to say that a butter like fat, similar to olive and palm oils (C. H. O.) holds a glacial and deliquescent form of phosphoric acid (H. O. P.) by the side of a nitrogenous substance called cholin, of which the elements are C. H. O. N. In the last two of these substances we have phosphorus and nitrogen in unstable equilibrium, and constantly undergoing the interplay of change felt and known to us as conscious thought, soul. When the blood brings alcohol to these cells, the water (H. O.) of the phosphoric acid and of the cholin is at once taken by the affinity of the alcohol, the nitrogen, phosphorus and glycerine are thrown together, and a minute nitro-glycerine explosion takes place in the little microscopic cells of the brain. Wherever nitrogen, glycerine and phosphorus are brought

together in unstable chemical equilibrium, there will be mischief, whether under Hell-gate or in the human brain, for that is the chemical condition of the most terrible explosives known.

When alcohol gets into the blood it does, and must, "go to the head." Millions of little cells at once undergo explosion, and the result is that this complex organism, the human body, is no longer under rational or orderly control. The little nerves that hold the gateways of the blood at the end of the arteries let go their hold, for they are paralyzed! The blood rushes to the face, and flushes it; the heart has a torrent of blood poured upon it, and beats, and flutters; the limbs move without will or purpose; the tongue moves wildly, and incoherently, because mental order and control are lost.

Taken in small quantities there are some who yet say alcohol may have some good effects. When science discovered the true nature of alcohol, as herewith explained, it gave a decisive No! to every question of this kind. Drs. Benjamin W. Richardson, Willard Parker, W. H. Draper, and thousands of other distinguished physicians, express the true verdict when they say: "*Alcohol is our worst enemy*, always more or less baleful in its effects."

Alcohol is one of the most powerful antagonists of life. When pure, it is a deadly poison; when diluted, its pernicious effects are not so rapid, but it is ever injurious to health. The able researches of Drs. E. Smith, W. M. Lalleman, Duroy and Perrin, have positively proved that alcohol is not a food, and that it is neither transformed nor destroyed within the organism. Alcohol does not assimilate; it passes out of the stomach in precisely the same condition in which it entered it. It shows itself in the breath, in the perspiration, and in the evacuations. It is still alcohol. Part may be retained in the blood, which it thins and weakens.

That all of these effects are as stated is known from experiments, and from the nature of alcohol. It has been excreted from an animal cell, as unable to assimilate with it. It is matter that has already been burnt up by vital process, and thrown out as so much dead matter. It cannot be used in any vital process any more than you could build a fire by shoveling ashes into your stove,

By putting this dead irritant into the blood, every organ it touches is inflamed, which is its effort to get it out of the system, because it cannot be assimilated. The old, and with some yet, still prevailing delusion about alcohol is that this inflammation caused by poisonous irritation, is a

stimulation, an exhilaration, a warmer of the blood, or a cause of some advantage in some way. Nor is it strange that our feelings should deceive us as to the irritation, inflammation and brain destruction which alcohol causes in the human system. Our feelings mistake the irritation for warmth; the fullness and puff of inflammation for stimulation and food; the irregular and destructive action on the brain cells for exhilaration. But the reverse of this is the fact. The irritation reduces the warmth of the body, and makes man less able to endure the cold; the inflammation is a swelling resulting from obstructions which the tissues are trying to remove; the light-headedness is not exhilaration, but an insanity and disease caused by a destruction of the brain cells, so that the will is gone, and the mind and reason are uncontrollable. You can get food and warmth out of alcohol when you can get fire by reburning your ashes. It will give you real stimulation and exhilaration when the swelling of a sore, and the destruction of the brain, will give them to you.

Food, warmth, stimulation and exhilaration only come from real nourishers, like brain and nerve foods which assimilate in the system, and thus rebuild and make it strong, hearty and vigorous. Alcohol does the reverse of nourishing, warming and sustaining. It simply inflames and destroys. Alcohol is the one substance never to be taken into the human system.

These results, stated in short in Zells' Encyclopedia, have been proved over and over again. Leading scientists in France, Germany, England and America, though working separately, have substantially reached the same conclusions. For the development and practical application of all these discoveries, we are greatly indebted to Dr. T. S. Lambert.

It may be asked why physicians and scientists are not unanimous as to this verdict. They are becoming so with reasonable speed. It takes many years for those who ought to have made a discovery, or been first to accept it when made, to actually do so. The trouble is, that physicians whose minds are full of old theories cannot at once see and apply new chemical facts.

"I speak the more positively on this subject, because for more than thirty years I have faithfully tested the correctness of the sentiments I have given you in relation to the therapeutic effects and uses of alcoholic liquids in an ample clinical experience, both in hospital and private practice, and during that time I have found no case of disease, and no emergency arising from accidents,

that I could not treat more successfully without any form of fermented and distilled liquors than with."—N. S. Davis, Ex-President of American Medical Association, and author of the standard work, *Principles and Practice of Medicine*.

"As a result of thirty years of experience and practical observation, I feel assured that *alcoholic stimulants are not required as medicine*, and believe that many, if not a majority of physicians of to-day, of education and experience, are satisfied that alcoholic stimulants as medicines, *are worse than useless*; and physicians generally have only to overcome the force of habit and the prevailing fashion in medicine, to find a more excellent way, when they will look back with wonder and surprise, that they, as individuals, and as members of our honored profession, should have been so far compromised."—Dr. Green's Address to the Medical Association of Boston.

"Forty years ago the fathers of the very men who now prescribe brady, wine and ale for almost all diseases, prescribed bleeding, calomel and starving instead. They did this conscientiously, too, no doubt, but then as now, the tendency of their medicines was to kill rather than to cure. In the London Temperance Hospital the mortality is four and a half per cent. lower than in any other hospital taking the same run of cases. Alcohol is almost never used in the hospital; is not employed in making tinctures, a solution of one part of glycerine to two of water being substituted at a cost of one-fifth less than that of alcoholic tinctures, and used in amputations or typhoid fever, with results that demonstrate the superiority of this method."—Dr. J. Edmonds, London, Eng.

In the Manchester Royal Infirmary, England, the medicinal use of alcohol has fallen off in recent years eighty-seven per cent., and the death rate from about eleven to about seven per cent.

"In no instance of disease in any form is alcohol a medicine which might not be dispensed with, and other agents substituted."—Dr. J. B. Nichols, editor Boston Journal of Chemistry.

"The sale of drink, is the sale of disease; the sale of drink, is the sale of poverty; the sale of drink, is the sale of insanity; the sale of drink, is the sale of crime; the sale of drink, is the sale of death."—Sir Benjamin Ward Richardson, M. D.

Mrs. Bangle.—They say half the world doesn't know how the other half lives.

Bangle.—Then they don't read the patent medicine testimonials.

Fracture of the Skull at the Vertex, with a Series of Cases.*

By Clinton B. Herrick, M. D., Troy, N. Y.,
Clinical Professor of Surgery, Albany Medical College, Surgeon Troy Hospital.

As a condition, per se, fracture of the skull need not be considered in a serious light, inasmuch as the damage done to the bone does not interfere in any wise with any of the functions or activities of the body, and the replacing of the fragments, or the care of the same, is reduced to the manifestations of the primary attentions.

But as the skull is a box wherein lies the brain, and any violence which is sufficient to fracture the skull, is carried to and into this intracranial organ, producing immediate symptoms of greater or less severity, or a material injury or destruction, the latter coexisting condition becomes at once the one demanding attention, relegating the actual fracture to the position of being treated entirely according to the demands to be met with, to improve the intracranial condition.

Fracture of the skull is usually classified into various kinds, as simple, fissured, compound, depressed, and combinations of these, but the importance of this is entirely lost sight of in the presence of the intracranial condition produced in connection with the fracture.

We have been taught, for years, that certain signs and symptoms accompanied with intracranial conditions dependent upon a fractured skull, and that they followed, to a great extent, the severity of the external condition.

Looking backward over the field of experience, we find that this teacher throws quite a different light upon the subject, and not only do we see that signs and symptoms are many times widely at variance with the actual lesion, but that they too are modified in many ways other than those long looked upon as positive, and it is with the object of noting these by illustrative cases that this short paper has been prepared.

Take those cases where from a blow upon the head without any very marked external evidence of wound, and therefore a presumably intact or at most a slightly fissured fracture of the skull where, from book-lore we expect at most a short stage of come and quick recovery from any or all symptom of injury. Then again those cases where with more or less extensive fracture, with depression, we have always expected

*Read before the Medical Association of Troy.

to find an unconscious individual with many positive signs of the intercranial condition, and which case will awaken as from a sleep the moment the depressed bone is elevated, or at least be followed by amelioration of all of the concomitant symptoms for a time; at least can we always expect that?

CASE.—A young man received a blow from a stone thrown by some one, the same striking on the parietal region and glancing off leaving but a slight wound of the scalp. Temporary dizziness, immediate travel on cars for some distance, some headache following; passed over as trifling. Months subsequent, convulsions more frequent; operation, exposure at site of blow; fissure running into suture, no evidence of depression, fissure chiselled open allowing some serum to escape; drainage; no marked improvement. Some time later another operation, trephining found cyst of dura and spicula of bone. *Review.*—Slight condition with very serious outcome.

CASE.—Child received bullet at short range against skull, non-penetrating but depressed outer table. Deep coma at once. Trephining, no depression of internal table. Coma lasted several days after operation; finally recovered. *Review.*—No lesion; deep and lasting coma.

CASE.—Child under one year; kicked by horse in parietal region; slight external wound; bone so badly displaced as to almost cut through scalp. Depression to a marked degree; no symptoms whatever. Complete recovery; bones reshaping themselves to some extent, but projection still prominent and skull misshapen. *Review.*—Apparent extensive depression; absolutely no symptoms.

CASE.—Similar to above. Child fell off wall striking on head. Decided depression of small fragment. No symptoms. Recovery, without sequelæ.

CASE.—Man struck by train in front parietal region, causing a compound comminuted depressed fracture of a limited area, constitutional symptoms all very pronounced; stupor deep; shallow, irregular respiration. Operation without anesthesia; removal of all pieces; brain very slightly injured; no laceration; coma lasting several hours after operation for removal. *Review.*—All symptoms severe and lasting with but slight injury actually inflicted upon the brain.

CASE.—Man struck by guard of locomotive; blow received in front parietal region; picked up unconscious. Showed external wound and fissure of skull, showing depression of at least the external table of an inch and a-half long by half inch broad. Operation by trephining showed no depres-

sion of internal table. Recovery prompt. *Review.*—Slight evidence of injury with severe stupor for some time.

Now to cite opposite effects we will note the following:

CASE.—Man fell through a bridge striking on his head upon some stones or rock. Picked himself up and walked for assistance. No coma. Had an extensive depressed fracture over fronto-occipito region some several inches long by one broad; in fact it seemed the entire half of upper skull. Removal of large loose segment. No constitutional symptoms from first to last. Recovery. *Review.*—Extensive injury with no symptoms or coma. (In this case the brain was not lacerated, but dura torn badly).

CASE.—Woman struck on head in frontal region by some sharp object (said to be the ash pan cover of a cook stove), having a compound depressed fracture of skull as a result with oozing of considerable brain matter. Picking herself up from the floor where she fell, she walked several blocks on the street and remained entirely conscious; no other symptoms. Operation, removed bone, and large quantity of brain matter followed. Coma appeared 48 hours after, ending in death. *Review.*—Extensive injury with laceration of brain, and no primary symptoms (these appearing very late) and really depending upon general inflammation rather than direct injury.

Now these are a few cases, selected from many, to typify the fact that many cases of fracture of the skull are accompanied by symptoms far different from what we might be led to expect from the ordinarily conceded relations between cause and effect, or such as are laid down by the text-books as certain to follow, and leads us to the lesson these cases teach, that in diagnosing we should be guarded, in prognosis reserved to tardiness, and in treatment thorough.

What then are the signs and symptoms associated with conditions of fracture of the skull; and what do they indicate to as the actual condition present and upon which we can base a diagnosis and prognosis?

Coma.—An unconscious state usually present to a certain degree in any fracture of the skull, should be given significance as indicating injury to the brain according to the profoundness and length of the same. If accompanied with wound, inspection of the structures will associate the severity of the lesion with this state. If no wound exists, the profoundness of coma is diagnostic, not necessarily prognostic. Relapsing coma, or the state coming on late in the case increases the gravity of the same many fold.

Consciousness, on the other hand, does not improve the prognosis where the brain is seen to have suffered much damage.

Convulsions—seldom seen at first injury—when occurring later is diagnostic of irritation to dura or brain through spiculæ; and prognostic in lending gravity.

Mental Aberration—Only appearing, if at all, in the conscious condition, is diagnostic of laceration of frontal convolution of cerebrum; and prognostic only when viewed in conjunction with other signs and symptoms, always weighing the balance on the side of gravity.

Other symptoms that are to be noted directly after the primary ones, or during the course of the case are equally important as both diagnostic and prognostic, but especially prognostic in the case, are,

Pupillary Disturbance which is no longer considered of any value whatever, diagnostic or prognostic, as variations of all kinds are noted in cases parallel and opposite.

Circulatory Disturbance is likewise of but little value and only prognostic when, on the one hand, full regular and soft, and on the other, weak, rapid and irregular.

Respiratory Disturbance is of value in a prognostic sense, as the more gradual and regular the same diminishes in frequency, the graver the case. Stertorous and puffy respiration is at times seen where pressure is present, but the relief of the latter is not followed promptly by a regularity in this breathing, so as a sign it is of but little value other than to associate it with a coming fatal case.

A sign which has been lately brought into prominence by Dr. Phelps, of New York, as one of great significance is that of

Temperature.—In laceration of the brain, no matter what the external lesion is or is not, the temperature, dropping at first to subnormal as the direct result of the blow, rapidly rises and does so according to the amount of laceration, and consequently the gravity of the case. A steady high rise is considered of positive prognostic value in marking the case as fatal.

Paralysis, which is overlooked or masked in the early history of fracture of the skull, becomes, if it appears later, a diagnostic point relating directly to the region of the intracranial lesion, and becomes prognostic in direct relation to the extent and severity of the same, not necessarily fatal, but one that seldom recovers to the fullest normal extent.

That the treatment of fracture of the skull should be as thorough as the case will justify is unnecessary to state. A shaving of the entire scalp; removal of all loose bone, spiculæ and offending matter; free drain-

age from beneath the dura, if that be broken, otherwise leaving it undisturbed; daily dressings; complete rest, mental and physical, and careful watching for the unexpected or the possible, constitute the main features of treatment.

A Remarkable Case of Superfœtation.

On the evening of February 21st, 1900, I was called to see Mrs. J—, aged 41, multipara, the mother of nine children. Found her suffering greatly with severe pains in pelvic region, in no wise expulsive. It was plain that labor would soon set in. Examination revealed an abnormal state of affairs. The os was partly dilated, the waters had escaped, and I feared I had to deal with a cross presentation. After several hours, true labor pains came on, and with some difficulty I removed a fœtus, apparently three months old. It was seemingly healthy, not at all offensive. This occurred about 3 A. M. February 22d. At 11 A. M., after an entirely normal labor, my patient gave birth to a well developed living child, weighing 11 pounds.

There was one large, and a separate small placenta. Superfœtation, or the possibility of impregnating a female already pregnant (except at a very early period), is generally denied. In this instance we have an apparent impregnation after six months.

During an experience of forty years, I have not encountered or known of a similar case.

If any other physician has ever had a similar case I would be glad to hear from him through the Journal in regard to same.

JOHN P. NICHOLSON, M. D.
Salem, N. C.

According to a Vienna correspondent of the Medical Record, a blackmailing case with a humorous aspect has been occupying the attention of the criminal courts at Gratz. An elderly lady of great wealth one day received a letter saying that if she did not send the sum of 10,000 florins in small bank notes the writer would work a fearful revenge by opening in her room a bottle containing the bacilli of various infectious diseases, which would certainly cause her death. The lady appealed to the police, who discovered the would-be blackmailer. A bottle found in his possession really contained bacilli, which the culprit, who is a medical student, had stolen from his professor's lecture-room. A sentence of eighteen months' hard labor will doubtless prevent this promising youth from further blackmailing enterprises.—*Medical Age*.

THE

Charlotte Medical Journal.**Editorial Department.**

E. C. REGISTER, M. D.

J. C. MONTGOMERY, M. D.

Editors and Publishers.

No. 36 SOUTH TRYON STREET, - - - -

- - - - - CHARLOTTE, N. C.

SUBSCRIPTION. \$2-50 PER YEAR,**MAY 22d, 1900.**

The Medical Society of the State of North Carolina will meet in Tarboro, Tuesday, May 22d, 1900. The Board of Medical Examiners will meet the Wednesday before, being the 16th of May.

Through the courtesy of Mr. W. H. Fitzgerald the following rates will be in force on the railroads:

Round trip rates, from

Blacksburg, \$13.20	Gastonia, \$12.00
Charlotte, 11.20	Goldsboro, 3.00
Danville, 9.85	Greensboro, 8.05
Durham, 5.50	Henderson, 5.50
Fayetteville, 5.05	Hickory, 11.80
Forest City, 13.80	Lattimore, 13.35
Marion, 13.40	Raleigh, 4.50
Maxton, 6.70	Rural Hall, 9.70
Mooreboro, 13.50	Sanford, 6.75
Newton, 11.40	Selma, 3.00
Norfolk, 4.85	Suffolk, 4.05
Pembroke, 6.20	Weldon, 2.75
Winston-Salem, 9.20	Wilmington, 5.15
Rutherfordton, 13.95	

Tickets will be on sale May 15th and 16th for the meeting of the Board, and May 21st and 22d for the Society meeting, all having a final limit May 26th. Continuous passage in each direction.

The above rates apply to junctional points as named; if you do not live near a junctional point see your local ticket agent at once and he can have you a ticket ready.

The reduction will apply to all the main lines in the State, the Southern, Seaboard, Atlantic Coast Line, and the S. C. and G. Extension.

The meeting promises to be one of exceptional interest from a scientific standpoint. If all will contribute it will equal a post-graduate course, and the busier the doctor the less he can afford to miss it.

The Local Committee promise ample accommodation to all, hotel rates will be from \$1.00 to \$2.00 per day.

Dr. Julian M. Baker, of Tarboro, is Chairman of the Local Committee of Arrangements, and first-class display room can be secured from him by exhibitors.

Let all the members remember the Annual Discussion on "The Continued Fevers of North Carolina," and come prepared to make it profitable.

CONVALESCENCE.

In some diseases relapses are more common than in others and they are likely to occur during convalescence.

The average doctor is usually sufficiently solicitous about his patients during the active stage of the disease, but his interest is liable to cool off too suddenly as the patient begins to sit up and all seeming danger is past.

But in this weakened, run-down condition of the system, there is often serious danger.

There are people dead who might have been living now if the same proportionate care had been taken during convalescence as were manifested during the acme of the disease.

It is not that we should hang on to our patients until they are strong and hearty after some lingering disease. It is not meant that we should see them twice a day or oftener, but that we should continue our over-sight and management throughout convalescence. This is the harvest time for quacks and frauds of all kinds, and it is so because the physician does not consider the condition worthy of his attention.

A middle aged lady is treated for pneumonia, and for several days her life hangs in a balance. The attending physician is almost constant in his ministry and helpfulness, but the temperature slowly comes down, the pulse strikes 100, the breathing is easy and the patient passes into convalescence.

After the temperature has been normal for some time, the patient sitting up and appetite good, she is dismissed though there is a lingering cough and some expectoration. The patient left to herself reads the newspapers, and as time drags heavy, even the advertisements. The post-graduate course in medicine, which is thrown in with every year's subscription to the daily paper is taken in full and she decides that "Dr. Nocum's specific" is the very thing for her complete restoration. Takes five bottles in four months and finds herself well again. The doctor is forgotten, but Dr. Nocum is talked about to all her friends and she sends a two inch testimonial to the manufacturers

which duly appears in the daily paper's post-graduate course.

Among working people the dangers of this period of illness are intensified. The father or the son is anxious to get back to his work, the circumstances of his family almost compel him to be up and doing, and the doctor should be especially careful in dismissing this class of patients, especially after protracted sickness, or in those diseases liable to relapse. Let us regard convalescence as a part of the particular disease; not to be worried over, but to be watched after, for our own sakes, as well as for the welfare of the patient.

THE ILLNESS OF DR. MCGUIRE.

The physicians throughout the land will be pained to know of the serious illness of Hunter McGuire and all will unite in an earnest hope of a speedy restoration to health. Paralysis is reaching forth its iron hand to still the swift skillful fingers of the surgeon and he who has lead so ably and well the host of southern surgeons must lay aside his duty and his burden.

Would that he might delegate to someone all his skill, and energy and learning and experience. But the high-water work of his life will remain as an inspiration to those who strive to take up his mantle.

We trust that his recovery will be speedy and complete and that he may be spared many years yet to counsel and advise if not to do the actual work himself.

BIBLIOGRAPHIA MEDICA.

Our French brothers are not so busy getting ready for the Exposition but that they have time to start a new Medical Journal of considerable importance.

An Index Medicus is well nigh invaluable to a certain number of physicians and investigators and it is to be sincerely hoped that the present venture will be spared the fate that befell a similar publication in this country which was allowed to die of slow starvation because some men thought more of their rusty dollars than they did of their own good.

The French Index Medicus is issued from the *Institut de Bibliographie*; 93, Boulevard Saint-Germain, Paris; Morcel Baudouin is Editor in Chief associated with Charles Potain and Charles Richet. Such a combination of talent ensures the scientific worth of the Magazine and it only remains to be seen how the profession will support the project in dollars and cents or rather francs. The Index will be issued on the 15th of each month at \$1.00 a number

or \$12.00 a year anywhere in the Postal Union.

The January number is before us, containing 80 pages of carefully arranged matter.

The subjects are arranged under the following heads. Medical Science in General; Anatomy; Physiology; Individual Hygiene; Public Hygiene and Jurisprudence; Therapeutics, Pharmacy, Toxicology, and Materia Medica; Medicine; Surgery; Gynecology, Obstetrics and Pediatrics; Veterinary Science.

While we would much rather the Index in the English language, still it is much better in the French than not at all.

FEVER AND FLOWERS.

Some people have little time for the beautiful and the ornamental, and their life is spent in the pursuit of the useful and the necessary. Flowers will do very well for women and children, but for men only dollars and public offices will suffice.

But there is nothing useless in the world, everything has a purpose and a work. And by raising flowers we can keep off fever.

The relation of the mosquito to malaria has been definitely settled now and the practical deduction from this fact is how to get at the mosquito and stop the dreadful cost to the country from the constant presence of chills in certain sections.

Among the various culicidal agents suggested by scientists the chrysanthemum is at once the cheapest and the best.

So if you are bothered with chills and mosquitoes, or mosquitoes alone, plant your front yard in chrysanthemums and look after them carefully as a thing of beauty which will save you dollars and cents of sickness and disability.

The odor of this composite plant will certainly keep away the fever laden insect, and while delighting the eye will protect the home.

DR. GRAY OF WINSTON.

In the death of Dr. Gray the profession lost a most worthy member and the State one of her devoted sons.

He was a man of many talents and they were always bright and shining from constant use in his everyday life. He spent his years in doing good, not for any money that was in it, but simply as an expression of the quality of his own character.

The poor we have always with us, and to many the fact soon becomes monotonous and even irritating, but this man, in the goodness of his own heart, ministered to rich and poor alike. Some are willing to

do charitable deeds if they can see that the objects are helped up and made stronger thereby, but many forget that giving helps the giver more, very often, than it does the one receiving. And so this physician's life was ripe and mellow with the silent, powerful influences of many deeds of kindness and of mercy. For some time before his death his health was feeble and uncertain, but through it all he was the same true man.

He came down to the grave full of honors, the respect and love of his fellow men, those eternal honors that fade not as the laurel withers upon the brow of the victor, but remains ever green upon the head of him who brings forth good where evil might have been.

BOOK REVIEWS.

Diseases of the nose and throat. By J. Price Brown, M. B., L. R. C. P. E., Member of the College of Physicians and Surgeons of Ontario; Laryngologist to the Toronto Hospital; Laryngologist to the Protestant Orphans' Home; Fellow of the American Laryngological, Rhinological, and Otological Society; Member of the British Medical Association, The Pan-American Medical Congress, the Canadian Medical Association, the Ontario Medical Association, etc., etc. Illustrated with 159 engravings, including 6 full-page color-plates and 9 color-cuts in the text, many of them original. 6 1/2 x 9 1/2 inches. Pages xvi-470. Extra cloth, \$3.50, net. The F. A. Davis Co., Publishers, 1914-16 Cherry St., Philadelphia.

There have appeared within a short time quite a number of new works and new editions by well known authors upon the subject of the Nose and Throat, but the many excellent features of this work makes it welcome to the list. The work contains 471 pages and is divided into three sections. The first section is devoted to the nasal passages and contains 181 pages; the second section is on the diseases of the pharynx and takes up 143 pages and the remainder of the book 147 pages is devoted to diseases of the larynx. The style of the author is clear, direct, condensed and expressive, and it is written in readable and enjoyable English. One noticeable feature of the book is that the author has given just as much time, attention and space to the consideration of one disease as another thus sparing the reader of an over discussion of one condition to be annoyed by the scant consideration of another. This is quite a pleasant feature and very different from many other special and general works on this subject.

This work is a valuable one from the fact alone that it is no compilation and that the author is a bold, independent thinker and certainly an independent writer. The author respects the good found in all treatises and avails himself fully of such, but he maintains his individuality throughout. This makes the work thoroughly original—a beautiful feature in any work. The work seems to be complete in every sense of the word—nothing being omitted. It will prove of equal value to the specialist who wishes to know the views of another specialist, and to the general practitioner who desires to consult such views in all cases of doubt. In considering each disease the anatomy of the parts concerned are clearly and briefly given. Diagnosis and symptomatology are carefully gone into so that few errors need be made if due attention is given to what is said. The treatment is full and explicit. A great many familiar and helpful suggestions on matters of therapeutics are given throughout the work. It is impossible to examine the work in detail. The illustrations, 159, are good and have been wisely selected. The publishers have spared no pains to make the volume attractive. The type, paper and binding are all that could be desired. We heartily congratulate the author on the result of his labors and cordially commend the work to our readers.

Care and Treatment of Epileptics by William Pryor Letchworth, LL. D., Ex-President of the New York State Board of Charities, Ex-President of the Eleventh National Conference of Charities and Correction, Author of "The Insane in Foreign Countries," "Children of the State," "Relief and Reform," "Home for Homeless Children," etc., with 73 illustrations. Octavo, gilt top, \$4.00. G. P. Putnam's Sons, New York and London, 1900.

In the opening chapter of this beautiful work the writer says that in the enlarged sphere of the charities of this day of extending philanthropy it may be said that the claims of every afflicted class except the victims of the mysterious disease of epilepsy are fairly recognized. The insane, the fickle-minded, the deaf and dumb, the blind, the paralyzed, defective children, and other dependent classes receive sympathetic attention. Mr. Letchworth estimates that there are not less than 113,000 epileptics in the United States. So far only five states have established separate institutions for that portion of this vast number which require special care and treatment. Mr. Letchworth's volume gives the various methods adopted by institutions in different countries for caring for epileptics, and

presents the opinions of many specialists respecting their treatment.

The author's connection with the New York State Board of Charities, extending through nearly a quarter of a century, during ten years of which time he held the position of President of the Board, has given him rare opportunities for studying this and kindred subjects; and his extended observations and researches in other countries give to his statements and conclusions weight they would not otherwise possess.

This volume should not only find its way into the hands of all those interested in the care and treatment of epileptics, but, like Mr. Letchworth's earlier volume, the *Insane in Foreign Countries*, should take its place as a standard work for reference in the leading libraries of the country.

The book is very neatly printed and bound and the large number of illustrations contained in the volume add greatly to its interest and value.

The International Text-Book of Surgery, By American and British Authors. Edited by J. Collins Warren, M. D., LL.D., Professor of Surgery in Harvard Medical School; Surgeon to the Massachusetts General Hospital, and A. Pearce Gould, M. S., F. R. C. S., Surgeon to Middlesex Hospital, &c., &c. Vol. II. Regional Surgery. With 471 Illustrations in the Text, and 8 Full-Page Plates in Colors. Philadelphia: W. B. Saunders, 925 Walnut St. 1900. Price, Cloth \$5.00; Sheep or Half Morocco \$6.00, net.

Quite recently it was our pleasure and profit to read and review limitedly Vol. I. of the International Text-Book of Surgery. In a reference work like this, where all is excellent, comparisons are invidious. Throughout all the text principles and practice, facts and their applications to definite needs are clearly expressed and judiciously blended. The list of contributors to this volume includes the following well known names: Robt. W. Abbe, William T. Bull, James Cantile, William Bruce Clarke, William B. Coley, E. Treacher Collins, H. Holbrook Curtis, N. P. Doudridge, John B. Deaver, John W. Elliott, Christian Fenger, W. H. Forwood, A. Pearce Gould, J. Orne Green, M. L. Harris, Fernand Henrotin, Rudolph Matas, Chas. M. Burney, Andrew J. McCosh, Lewis S. McMurtry, J. Ewing Mears, John Murray, Robt. W. Parker, Geo. A. Peters, James J. Putnam, A. W. Mayo Robson, William L. Rodman, Chas. A. Siegfried, H. Tuholske, Weller Van Hook, J. Collins Warren. These men are all too well known to the medical profession to need comment as to their high standing as medical men,

writers and teachers, and as a natural consequence their writings carry with them weight and authority. It is an utter impossibility to review this work as it should be done, but suffice it to say that it is exceptionally complete and original. It has a good index and the work typographically is most beautiful and pleasing.

Surgical Pathology and Therapeutics. By John Collins Warren, M. D., LL.D. Illustrated Second Edition, with an Appendix containing an enumeration of the Scientific Aids to Surgical Diagnosis, together with a series of Sections on Regional Bacteriology. Price, cloth, \$5.00 net; half-morocco, \$6.00 net. W. B. Saunders, 925 Walnut Street, Philadelphia. 1900.

The author states in the preface that no young practitioner can be regarded as thoroughly equipped for surgical work who is not both a good pathologist and an expert bacteriologist. The confidence born of a knowledge of Pathology and Bacteriology enables him to assume grave responsibilities, and to grapple successfully with the most complicated problems. It is from men thus equipped that we have a right to hope that the future masters of surgery are to be evolved.

The author associates pathological conditions as closely as possible with the symptoms and treatment of surgical diseases, and impresses upon the student the value of these lines of study as a firm foundation for good clinical work. In this the second edition all the new and important changes are embodied in a new appendix, which replaces the old one, and in the chapter on Antiseptic Surgery presenting in as practical a manner as possible the resources of surgical pathology. The author gives a series of sections on what is termed regional bacteriology, in which is found a description of not only the flora of the affected part, but also the general principles of treating the affections which they produce, based upon the latest views of the best authorities.

The work is certainly full of very valuable material. Where necessary the work is well illustrated, clearly printed and handsomely bound.

The Year-Book of the Nose, Throat, and Ear. The Nose and Throat, Edited by G. P. Head, M. D., Professor of Laryngology and Rhinology in the Post-Graduate Medical School of Chicago. The Ear, Edited by Albert H. Andrews, M.D., Professor of Otology in the Post-Graduate Medical School of Chicago. 8vo.; 274 pp. Chicago: Chicago Medical Book Co. 1900.

Much progress has been made in the subjects of Otology and Laryngology within

the past few years, so much so that the press of the Chicago Medical Book Company have issued this work as a Year-Book of the Nose, Throat, and Ear. It is to be hoped that this work will meet with prompt and ample success, sufficient indeed to cause the editors to make it a standard annual publication. It deserves success. The first portion of the book, devoted to the nose and throat, is edited by Dr. Head, and the second portion, on the ear, is edited by Dr. Andrews. Much of the literature found in this work has appeared in the medical monthly periodicals. This is owing to the rapid progress that has taken place in these branches of medicine. The editors have given a very comprehensive review of the more important articles of value that have appeared during the year 1899. In connection with a very complete index they furnish a list of all the periodicals to which reference is made in the body of the work. The authors give a very candid outline of the subject-matter of each article which has come under their observation. The book will be of inestimable value to the otologist and laryngologist, and will furnish valuable material for the general practitioner. The volume is neatly bound and printed.

Text-Book of Materia Medica for Nurses. Compiled by Lavinia L. Dock, Graduate of Bellevue Training School for Nurses. Third Edition. Revised and Enlarged. G. P. Putnam's Sons. New York. 1899.

This book contains 240 pages, and is divided into Part I. The Inorganic Materia Medica, including the Alkalies and Alkaline Earths, the Metals, Non-metalic Elements, Inorganic Acids, Organic Acids, and the Carbon Compounds.

Part II. The Organic Materia Medica, including the Vegetable Kingdom and the Animal Kingdom. New Drugs arranged alphabetically, Appendix and Index.

There has been a great need for a work on Materia Medica prepared along the special lines followed in class recitations. We have noticed no work of this kind until the publication of this one, which is a most excellent work of its kind.

No physician can over-estimate the value of a trained nurse in serious sickness. This work thoroughly fits them for these arduous duties. It includes something of the source and composition of drugs; their physiological actions; signs indicating their favorable or unfavorable results; the symptoms of poisons with their antidotes, and practical points on administration. The work is nicely bound and neatly printed.

New, Old and Forgotten Remedies. Papers by many writers, Collected and Arranged and Edited by E. P. Anshutz. Philadelphia: Boericke & Tafel. 1900. Price, Cloth \$2.00 net. By mail \$2.20.

This work contains three hundred and eighty-six pages and gives a description of the new, old and forgotten remedies, as collected and arranged by the author. Under the description of the many remedies is also given the nat. ord., the common name, the preparation and the therapeutical indications.

Acalyha Indica, *Acedum Lacticum*, *Æthrops Antimonialis*, *Agave Americoua*, *Anagalis Arvensis*, *Arsenicum Bromatina*, *Aspidospermine*, &c., are some of the remedies described. Under the description of each remedy the author announces in brackets the writer of the paper and where it can be found. The work is well printed and neatly bound.

A Syllabus of Therapeutics. Compiled by Hubert A. Royster, A. B., M. D. Paper, 50 pages, 50 cents, from the author or from A. Williams & Co., Raleigh, N. C., 1899. St. Augustine Printery.

This very convenient and well arranged syllabus will be found very useful to the student in fixing in his mind the most important facts of this very important branch of medicine. Bartholow's *Materia Medica and Therapeutics* has been closely followed in the preparation of these notes though the arrangement of the subjects is somewhat different.

Eleven divisions are made, Cathartics, Emetics, Anthelmintics, Urino-Genitals, Antiseptics, Restorative Agents, Agents increasing Waste, Excito-Motors, Cerebral Excitants, Cerebral Sedatives, and Motor Depressants.

The subject matter is excellent and worthy of a more permanent binding than the printers gave it.

A Barbecue Toast by A. M. Ballard, M. D. Illustrated by Fred A. Hull.

This illustrated booklet is quite a substantial souvenir of the Buncombe County Medical Banquet of 1900.

Nearly all the members are included in the illustrations, and Mr. Hull has so caught the salient features of each one that we recognize them at a glance. The text is not in prose, but is in something else and matches well the excellent cuts and beautiful press work. It is somewhat of a shock to see the dignified and courtly physicians of Asheville served up in such style, but they are jolly good fellows at heart and so

it becomes only a pleasant way of showing a deep regard.

The author, artist and publisher are all to be congratulated not for what they did, but for the way they did it.

Transactions of the Mississippi Valley Medical Association. Seventy-Fifth Annual Session, held at Chicago, Ill., Oct. 3, 4, 5 and 6, 1899. Vol. I. Printed for the Association. 1899.

You scarcely find a handsomer volume than the one before us. The transactions are a credit to any society, and speaks well for the progress and advancement of the Mississippi Association. It not only gives the proceedings of the Society in nice form but also a great many most excellent papers by prominent medical men of the Association. Dr. Duncan Eve, of Nashville, Tenn., is President, and Dr. Henry E. Tuley, of Louisville, Ky., is Secretary. The volume is prettily bound and neatly printed.

Transactions of the American Pediatric Society. Eleventh Session, held at Deer Park, June 27, 28 and 29, 1899. With the Constitution. Edited by Floyd M. Crandall, M. D. Vol. XI. Reprinted from the Archives of Pediatrics. 1899.

Dr. W. P. Northrup is President of this Society, and Dr. Samuel S. Adams is Secretary. The volume contains the minutes, reports, and many papers of great value. The methods of Instruction in Pediatrics is the subject of the President's address, which is a very able and instructive one. Many other papers of equal merit and value. The volume is well bound and ably edited.

LITERARY NOTES.

THE "NEW LIPPINCOTT" MAGAZINE FOR APRIL, 1900.—The Complete Novel in the "*New Lippincott*" for April is entitled "The Heart of the Ancient Wood," by Charles G. D. Roberts. The few but large souled human characters in it live in the woods of the North, close to Nature's heart; with the beasts of the forest for their friends. Yet even here the old, old story is very present; the wild surroundings cannot entirely efface the coquetry natural to woman and there is rivalry of a unique kind to bring this out.

This issue is replete with good fiction: A Complete Novel and four Short Stories. Seumas MacManus has one of his characteristic, humorous Irish stories call "A Celtic Beauty;" "Their Last Trek" is by H. Anderson Bryden, an athletic Englishman who, having travelled extensively in South

Africa, is thoroughly up in his subject, and in this story he presents a touching picture of Boer life. Robert Shackleton writes an amusing sketch of the old South, reflected in New York, in which the "Randolphs of Virginia" are conspicuous characters. "The Alpine Rose," Mrs. J. K. Hudson's fourth story in her series on Mormon life, receives its title from the little mountain flower which is sometimes found on the highest peaks in this country, as well as in Switzerland, and which in this instance proves the link that binds an unhappy Mormon wife to her old home across the sea.

Stephen Crane's second paper in his series on "Great Battles of the world" is "The Storming of Badajos," a remarkable commentary on the present war in South Africa. Eben E. Rexford's "Hints on Home Gardening" is specially valuable in of the many families who are moving to the country at this period of the year and need just this help to become successful planters. "Birds of Passage," a paper by Earnest Ingersoll, gives interesting facts about how birds find their way on the long journeys they undertake semi-annually. The article "by a woman, about women and for women" is called "The College Girl and the Outside World," by Sophia Kirk, whose long sojourn at Bryn Mawr College must give value to her views on this subject.

The poetry of the month is by Clinton Scollard, Theodosia Garrison, Edith M. Thomas, and Thomas Bicket.

"THE COMING AGE" FOR MARCH.—The March issue of the *Coming Age* contains a varied, interesting, and instructive table of contents. Rev. James Henry Wiggin, an intimate personal friend of Charlotte Cushman, contributes a delightful conversation in which he relates many interesting and little known facts in the life of the great actress. Other literary features, aside from the fiction, are "The Poems of Emerson," by Mr. Charles Malloy, president of the Emerson Society of Boston; "The Kinship of Souls," a study of Dr. Reun Thomas's notable work, by the Rev. R. E. Bisbee; The Poems of Homer, considered as an allegory of the ten great battles of life, by William Cox; a sketch of the life and work of Professor James Mason Hoppin of Yale, by William Ordway Partridge. These features, however, are supplemented by a number of papers on psychology, vital religious problems, social and economic advance. Among the most interesting of the latter is a contribution entitled "Race and Religion in Swiss Referendum Votings," by Eltweed Pomeroy, president of the American Direct

Leaislation League, and a very thoughtful paper by the Rev Gustavus Tuckerman, entitled "The Relation of Religious Classes to Social Regeneration."

Among the features of Scribner's Magazine for April, the animal story by Ernest Seton-Thompson, illustrated by him, will attract the large audience which has been fascinated by "Wild Animals I have Known." In this story is given the life and adventures of a curious little animal of the southwest, known as the Kangaroo-Rat.

The group of eight poems, translated from the French of M. Henri de Régnier for *The Living Age* by Mary D. Frost, and published in the numbers of that magazine for March 10 and 17, are remarkable specimens of deft rendering from one tongue to another, with the least possible loss of the rare flavor of the original.

The Puerto Rican tariff question is editorially discussed in the *Review of Reviews* for April, and in the same magazine there is an able exposition of the relations of the United States Constitution to the Territories, by Prof. Harry Pratt Judson, of the University of Chicago.

ABSTRACTS of the One Hundred Leading Articles of the Month.

Pneumonia Treated with Antipneumotoxin.

Four cases of pneumonia treated with antitoxin are reported by Charles B. Canby in the *Maryland Medical Journal* for March.

One of the cases occurred in his own practice and was a male age 20, who had passed the crisis when he imprudently left his bed, dressed and went into the yard. The day following this exposure he was delirious, with a temperature of 104, respiration 56, and pulse too rapid to count. There was severe pain on the right side with consolidation of the right lobe.

He was given 12 c.c. of antipneumotoxin and in three hours his temperature fell two and a half degrees. The following day his temperature was 99, respiration 24, and pulse 96.

In another case there was plain history of pneumonia, temperature 103, pulse 110, rapid breathing, cough, rusty sputa, with consolidation of right lower lobe.

On the third day of this condition he was given 10 c.c. of the antitoxin, and the next

morning his temperature was 99, with pulse and respiration much improved.

In the third case there was consolidation all over the right lung, temperature 103, pulse 108, respiration 40. She received 10 c.c. of the serum, and the following day her temperature was normal, pulse 80, respiration 20. In the evening she had a chill and temperature went back to 105 with a respiration rate of 32. 10 c.c. of the antitoxin was given, and 24 hours after the injection her temperature was normal.

The fourth case had a temperature of 103.8, pulse 140, and respiration 42. On the third day, 20 c.c. of the serum was used with only partial relief, and 20 c.c. was given in the night. The following morning the temperature was 99, pulse 76, respiration 28.

This serum is prepared in the same way as the antitoxin for diphtheria, and if Dr. Canby's report can only be duplicated a few times we shall have the same potent remedy in pneumonia as we now have in diphtheria.

Sphenoidal Suppuration.

A case of fatal sphenoidal suppuration in a man age 42 with a specific history is reported by Samuel Lodge, Jr., in the *Laryngoscope* for March.

When admitted to the hospital the patient had been suffering constant pain in right ear and right side of face for six months. Had syphilis nine years previously. He improved considerably for a time after admission but suddenly developed septic meningitis and died. On post-mortem the base of the brain was bathed in thick greenish pus, principally in neighborhood of pituitary body extended backward over pons and medulla. Frontal sinuses, cribriform plate and ethmoidal cells normal. Necrosis of walls of sphenoidal sinus, probe passing readily from base of skull through sphenoidal sinus into the nose.

The patient bore examination of his nose badly and the flow of pus from his right nostril was so profuse and persistent that its rapid reappearance after cleansing the nose made anything like a satisfactory examination next to impossible. The discharge coming away anteriorly and from a point above the middle turbinal led to the exclusion of maxillary, frontal, anterior ethmoidal, and sphenoidal empyemata. The edema of the right cheek suggested exploration of maxillary antrum. The results being negative, the edema was put down to some condition in the nose impeding the venous return.

Necrosis of the roof of the nose was dia-

gnosed, coupled possibly with posterior ethmoidal sinusitis. The copious flow of pus and the steady improvement of the patient for some days after admission led one to assume that pus was not pent up, and that to explore more thoroughly the roof of the nose and posterior ethmoidal cells would be likely to break down the natural rampart of granulation tissue and thus expose the cranial cavity to pathogenic invasion.

The sudden onset of septic meningitis dissipated this feeling of security. The opportunity for successful surgical interference has been allowed to glide by. Nevertheless grave risks to live as well as to important structures (*e. g.*, contents of right orbit) would necessarily have been incurred by the complicated surgical technique required. But the labors of Macewen and others in the analogous conditions met with in destruction of the tegmen tympani, or other parts, in middle-ear disease, have demonstrated that even in this situation much, if not everything, might have been accomplished by a careful but bold surgeon operating on similar lines.

Dislocation of the Shoulder and Hip.

An easy method of reducing dislocations of the shoulder and hip is described by Lewis A. Stimson in the Medical Record for March 3d.

The principle involved is that of steady moderate traction, and for the shoulder joint the method is as follows:

A round hole about six inches in diameter is made in the middle of the canvas of a cot, about eighteen inches from one end. The patient is placed upon the cot with the injured arm hanging down through the hole. The cot is raised upon blocks so that it will be at a sufficient height from the floor, and a ten-pound sand-bag is made fast to the wrist of the dependent arm. After a wait of a few minutes reduction is found to have taken place. None of the patients complained that the procedure is painful.

Theoretically it would be better to attach the weight to the arm close above the elbow, but in practice the wrist has proved to be the better place, for some of the patients would grasp the legs of the cot with the free hand, and thus interfere with the action of the weight. Possibly, lacking a cot, two tables might be used, placed end to end, the head resting on one, and the body on the other, with the arm hanging down between. But the lack of snug support of the shoulder might induce a mus-

cular effort, which would defeat or at least delay success.

The same method could be employed in dislocation of the elbow whenever the joint can be freely extended without the aid of anæsthesia, but under such circumstances traction by the hands alone is usually sufficient.

In dorsal dislocations of the hip the method is applied as follows: The patient is placed prone upon a table in such a way that his thighs extend beyond its end. The uninjured thigh is held horizontal by an assistant, to prevent tilting of the pelvis, and the injured one is allowed to hang vertically, while the surgeon, grasping the ankle, holds the leg horizontal (right-angle flexion at the knee) and gently moves it from side to side. If relaxation of the muscles is slow to appear, a sand-bag—five or ten pounds—is placed on the leg close behind the knee, or pressure is made there with the hand. This has succeeded in more than four-fifths of the cases in which he employed it, and often without the aid of anæsthesia. In the two cases which it failed, reduction was accomplished by traction in a line midway between right-angle flexion and full extension. He thinks they were cases in which the bone had left the socket at a higher point than usual, probably dislocations "above the tendon," so-called.

Tetanus Treated with Antitoxin and Carbolic Acid.

Ernest Laplace, in the Medical Bulletin for March, reports a case of tetanus treated by subdural injections of antitoxin and hypodermic injections of carbolic acid with complete recovery.

On the fifth day of the disease the patient was trephined and 20 c.c. of antitetanic serum injected slowly under the dura. The trismus did not change, and two days after the first injection the wound was again opened and 40 c.c. of the serum used.

There was some reaction from this dose, and in twenty-four hours opisthotonos set in. By the eighth day it was necessary to give chloroform to control the convulsions. On the ninth day the hypodermic injection of five drops of pure carbolic acid in ten drops of water was given every three hours and by the thirteenth day the jaws relaxed to the extent of one-fourth of an inch, which gradually increased. The carbolic acid was continued during six days, making a total of forty-eight doses of five drops each. The urine was normal throughout the treatment.

From the above case we learn:

That a severe case of tetanus (ten days' incubation) has recovered after the subdural injection of 60 cubic centimetres of antitoxic serum, prepared in the Pasteur Laboratory at Paris. The focus of infection was removed on the sixth day of the disease.

That the treatment was combined with hypodermic injections of 5 drops of carbolic acid in 15 drops of water, every three hours until forty-eight doses had been administered.

That no untoward brain symptoms permanently followed the subdural injections of this comparatively large amount of fluid.

All symptoms of tetanus had disappeared on the twenty-first day of the disease.

Normal Saline Solution.

Three cases, all obstetrical, in which the normal saline solution was used with the very best results, are reported by Edward O. Plumbé in the *Railway Surgeon* for March 8th.

They were all cases of postpartum hemorrhage, in one of which there was profound collapse with every indication of almost complete exsanguination. As to the method of giving the solution, the subcutaneous, while of course slower in its results than the intravenous, is by far the safest and most practicable.

An ordinary fountain syringe and a large hypodermic needle is all the apparatus required.

The point of injection should be the intra-clavicular region, the abdomen, the subaxillary or the submammary.

The rectal method he considers the simplest of all and in many cases it will be all that is necessary.

The solution should be injected as high as possible, and very slowly, not more than a pint at a time, as it may be repeated when necessary.

The temperature of the solution should not be less than 108 to 116 degrees Fahrenheit.

Technique of Closure of Wounds of the Abdominal Wall.

In some remarks on the influence of technique upon the results of closure of wounds of the abdominal wall, Charles P. Noble, in the *Boston Medical and Surgical Journal* for March 8th, contrasts the value of different suture material.

He considers the through and through suture as being applicable only in certain cases, as where drainage is necessary, or where the general condition of the patient

makes the saving of a few minutes of time of importance.

For about five years he used silkworm gut as material for buried suture, but more recently he has used the catgut for the same purpose with good results.

To succeed with silkworm gut as a buried suture he mentions the following points: rigid asepsis, light weight silkworm gut as material, the sutures tied without tension, the knots made with three ties and then cut short so that as small a body shall be left for encapsulation as is feasible.

Since May, 1898, he has used the catgut exclusively for the closure of the abdominal wound in the following manner: the peritoneum is first closed with fine cumol catgut, the under surface of one aponeurosis of the rectus is sutured to the upper surface of the other aponeurosis, the subcutaneous fat is closed with fine catgut and the skin is closed with the intracuticular stitch of catgut.

He concludes that in celiotomy wounds that can be closed without drainage suppuration should be two per cent, or less, postoperative hernia should be only a fraction of one per cent.

Suppurative Hepatitis.

A case of suppurative hepatitis which came to autopsy is reported by A. F. Stewart in the *Medical and Surgical Monitor* for March.

The patient was male, age 52; predisposition to tuberculosis; three years ago he received a blow over the hepatic region, which ever afterwards gave him more or less trouble; he came for treatment and presented the following symptoms: Ascites to an extreme degree, legs and scrotum edematous; later the arm above the elbow joint was swollen, chills and sweating were severe and intermittent; tongue coated; pulse 120 per minute; temperature 102½ degrees F.; nausea and vomiting; diarrhea persistent; leucocytosis throughout his entire illness. Hiccough was a constant symptom two weeks before death, hepatic facies and well marked emaciation. Drew away 20 pints of fluid from the abdomen and 6 pints from scrotum. Bandages were applied to the lower extremities; the kidneys were inactive, urinary secretions nearly arrested. The treatment consisted of cardiac stimulants and diuretics and preparations to sustain the patient; light nutritious food in small quantities and often repeated. The outcome was fatal; postmortem examination was held twelve hours after death. The liver was abnormally large, smooth on the surface, irregular in outline; on section

there were numerous pockets which contained pus. The external surface of the liver was very dark. The hepatic flexure of the transverse colon was adhered to the inferior border of the right lobe of the liver for a distance of four inches: a large opening into the intestine was found through which pus had escaped. The capsule of the liver was very tough and tenacious. The portal vein showed the results of the violence of the inflammation, and thrombi were found in several localities.

The Relative Humidity of our Houses in Winter.

An interesting report of this subject is made by Robert DeC. Ward in the Boston Medical and Surgical Journal for March 1st.

Several observations taken daily for twenty days gave the following means, inside air temperature 69 deg. outside air 36 deg. inside air humidity 30 per cent., outside air 70 per cent.

After giving the relative humidity of several very dry and desert places in the country at large he concludes that these examples show clearly enough that the atmosphere of the room in which the observations were made was drier than many desert regions. That so dry an atmosphere is not healthy, especially in our winter climate, there is no need of an argument to show—certainly not in a medical journal. This low relative humidity means excessive evaporation from skin, lungs and respiratory passages. Furthermore, the strain which is put upon the body in the rapid adjustment which it has to make when we go out from the high temperatures and the desert aridity of our houses in winter into a temperature it may be 70 deg., 80 deg., or 90 deg., lower, and a relative humidity of 70 per cent. to 100 per cent., is a greater one than we ought to repeat day after day, and many times a day.

The present methods of heating our houses are wretchedly inadequate from the point of view of supplying sufficient moisture. Undoubtedly, the relative humidity of the air coming from an ordinary furnace may be somewhat increased by increasing the size or the number of the evaporating pans in the furnace, or by placing pans of water on or, better still, within the registers.

Suppurative Lesions of the Kidneys.

Most of these conditions arise either from direct extension of infective bacteria from the urethra or bladder along the ureters and pelvis into the calices and medullary sub-

stance or by metastis, hematogenous or lymphangic from some previously infected area according to A. Stewart Lobingier in the Colorado Medical Journal for February.

The bacteria which are most destructive are the bacterium coli commune, the streptococcus and the staphylococcus pyogenes. Other bacteria may take part in a mixed infection such as the bacillus tuberculosis, gonococcus, pneumococcus and bacillus typhosis.

One of the commonest exciting causes of renal suppuration is uricacidemia resulting in renal calculus. In nephrolithiasis with the stone free in the pelvis, pyonephrosis sooner or later is inevitable.

Hematogenous and ymphangic infections represent a more acute involvement and may arise from a septic embolism from an ulcerative endocarditis pyophlebitis, lymphangitis, retro-peritoneal abscess, psoas abscess or caries of the spine, primary abscess of the liver, osteomyelitis or septic urethritis. Some cases may be traced to an appendiceal abscess, septic salpingitis, abscess of the ovary or septic parametritis.

Perinephritic Suppuration may be primary or by extension. In the primary form the bacteria have been present some time, waiting for some traumatism or acute congestion to lower the vitality and resistance of the tissues before they could begin work.

In calculous pyelitis nephrotomy is the only remedy. Where there is practically total destruction of the renal substance nephrectomy is indicated. A perenephric abscess uncomplicated by renal suppuration demands a simple incision, washing and drainage as in any local abscess.

Tuberculosis of Bones and Joints.

A rational line of treatment is outlined by DeForest Williard in the International Medical Magazine for March.

First. Assist the repelling powers by sunshine, fresh air, good food, keeping the digestion in the best possible order. When your medicines disagree change them or the method of administration.

Second. Rest and mechanical assistance by placing the patient in bed, applying rigid splint or some form of extension.

Third. Operative procedures, Iodoform oil injection he does not think much of, one per cent. solution of formalin in sterilized glycerine is better. Remove the local infection if possible especially when in the region of the foot, ankle, knee, wrist or elbow. Repeated erosions are better in children than excisions.

The operation of choice is total eradication of the focus.

The Operative Treatment of Pulmonary Tuberculosis.

A case of pulmonary tuberculosis successfully treated by drainage and iodoform, with apparent recovery is reported by Ferguson in the Medical News for March 17th.

Three operations were performed, the first being for an abscess of large size below the right clavicle which was found to communicate with a carious rib.

The intrathoracic and general symptoms not improving from the first operation, a second operation was done three weeks later and two inches of the 3rd rib removed and a large, hard, unyielding mass, completely filling the chest wall was found opposite the fourth and fifth ribs. Two and one-half inches of the 5th rib was removed directly over the mass. The mass was sutured to the parietal pleura and the wound packed and further operation delayed for a few days.

After two weeks the diseased lung was explored with grooved director and artery forceps but not a drop of pus was found.

A substantial piece of the diseased lung was removed for examination and into the cavity left a dram of iodoform was put and iodoform gauze packed in as a plug.

Within 12 hours, temperature dropped to 97, pulse 80, respiration 20 and said he felt better than for months. Once or twice a week, for five and a half months, a dram of iodoform in powder or emulsion was introduced into the diseased area.

At present the man performs all his functions as well as he ever did and over the very place where the dulness was greatest and consolidation thickest, a clear resonant note is demonstrable and a beautiful vesicular murmur is present with no evidence of tuberculosis.

Pernicious Nausea and Vomiting of Pregnancy.

In a considerable number of these cases the womb is sharply anteflexed and the cervix extraordinarily thickened, says Edward P. Davis in the American Journal of Obstetrics for March.

The pelvic organs are forced strongly downward and forward, and a contracted condition of the pelvic fascia and muscular tissue is present, which may be termed "pelvic tenesmus."

In other cases the womb is retroflexed or retroverted.

These patients are much relieved by raising the uterus as far as possible in the pelvis and by stretching the cervix. The latter is done at the risk of bringing on an abortion, but is sometimes effective in stopping the

nausea and enabling the patient to go to term.

In these cases, the salient feature is nausea and not vomiting. Many of the worse cases vomit but once or twice in 24 hours, but are nauseated while awake.

Coupled with this, and resulting from it, is the profound mental and physical depression from which these patients suffer.

Especially significant in the symptomatology of these cases is the obstinate, boring, burning pain beneath the sternum, and the discharge in the vomit or bowels movements of coffee-ground material, which is recognized as decomposed hemoglobin. Coffee-ground vomit has been observed repeatedly in nephritic patients and in those suffering from extensive degenerative disease.

In cases of pernicious nausea the patient is not invariably emaciated. In two fatal cases under observation emaciation was not present, nor could any appreciable diminution in the bulk of the patient's body be observed.

Death comes to these patients through exhaustion, and the downward progress of the patient is marked by the persistence of the nausea, the occurrence of coffee-ground vomit, the rapid failure in the metabolism of the body, as shown by the lessened discharge of solids in the urine, and the occurrence of albuminuria. In order, then, to appreciate the gravity of a case, it must be viewed in the light of the degree of exhaustion present, the condition of anemia present as shown by an examination of the blood, the degree of excretion maintained by the patient, and the evidences that the blood is undergoing rapid disintegration as shown by coffee-ground discharges.

As regards treatment, no narcotic or sedative can absolutely control the distressing sense of nausea. If the patient can be fed, put at absolute rest, and her strength so recruited that her nausea gradually ceases, she can go on to recovery. The replacement of the uterus to a better position and the stretching of the pelvic and cervical tissues is an important aid.

Unless the patient can be promptly supported and made better by these means, after careful consideration and consultation, the pregnancy must be ended.

Prolapsus of the Anus and Rectum.

This condition may occur in very early life. Geo. J. Munroe, in the Cincinnati Lancet-Clinic for March 10th, reports a case in a child three months old.

In the treatment the first indication is to reduce the protrusion and after washing in

a solution of boracic acid the fingers are greased and the two forefingers are pressed gently over the mass while the anus is dilated with two fingers of the other hand. Failing in this the author recommends the introduction of one finger into the anus and press the mucous membrane up around the finger.

The bowels should not be allowed to become constipated and the child should defecate in the recumbent position.

Pinworms, dysentery, phimosis, etc., should be attended to. Compress may be used if the prolapse is frequent.

In the adult the same plan for reduction may be used as in the child. A cotton pad is best to retain the bowel when replaced. Let the patient take a pint enema of cold water before the bowels move and try to have the action in a recumbent position or on a stool as near standing as possible, that is have a high seat in the watercloset.

After defecating wash the mass in cold water, apply oil and return it. Have the bowels to move just before retiring, so that the sphincter may have all night to contract.

He recommends the injection of 5 to 10 drops of carbolic acid every ten days in a fresh place each time. He concludes that the treatment of this condition in adults is not very promising, but children can always be cured.

Round Ligament Ventrosuspension of the Uterus.

D. Tod Gilliam, in the American Journal of Obstetrics for March, describes the technique of Fergusson's method of suspending the uterus by the round ligaments.

The basic principle is that of invagination of the proximal portion of the round ligaments in the abdominal wall. The successive steps as modified by Gilliam are as follows:

A median abdominal incision.

Break up the adhesions and bring the fundus forward. Seize the fallopian tube and bring it to the opening. For this purpose he uses a long slender forceps after the style of bullet forceps, but with blunt ends, these he calls button forceps.

Carry a heavy silk thread under the ligament close to the forceps in such a manner as to include a little of the tissue of the broad ligament.

The forceps are now removed.

The other round ligament is treated in a similar way.

Retract the skin and superficial fat on one side until an inch or more of the rectus muscle is exposed.

Thrust the perforating forceps, (designed

by the author with sharp end and edges), through into the peritoneal cavity and seize the thread which holds the round ligament.

Withdraw the perforating forceps.

While the ligament is held taut fasten it into the wound.

The exposed free loop of the ligament is now spread out on either side of its point of emergence and tacked down with catgut so as to form a button or bar.

After treating the opposite side in the same manner, close the median abdominal incision.

Puerperal Fever.

Under the title of "The Placental Inspection: Its uncertainties and its dangers," J. F. W. Ross, in the Canadian Practitioner and Review for March, says that 75 per cent. of all cases of puerperal fever are due to gonorrheal virus or the retention of a portion of the placenta.

Chloroform and the index finger are the weapons to use against the latter class of cases and when utilized the enemy will scarcely, if ever, be encountered.

Even after infection has taken place the thorough removal of all particles from the endometrium and the sterilization of its cavity by means of an antiseptic wash and antiseptic packing will often bring to an abrupt termination the septic fever and secure a rapid and satisfactory convalescence.

Of course clean hands are necessary for such work and men must learn to keep them clean if women are to be protected to the fullest extent.

The anesthetic is important to enable the physician to thoroughly explore the cavity of the uterus.

He believes that in all cases no harm can possibly come from the introduction of a clean finger into the uterus immediately after the delivery of the placenta to be sure that every thing has come away and not wait until the woman has fever and other symptoms of infection.

Shock and its Surgical Significance.

Under this title John H. Rishmiller has a continued article in the New York Medical Journal for March 10th and 17th.

After a careful consideration of the psycho-pathology, etiology, symptomatology, prognosis, prophylaxis and treatment he concludes that sensory-nerve imitation sufficiently powerful to produce exhaustion of the vasomotor centre causes a reflex paralysis and consequently a dilatation of the vascular mechanism.

Children and aged people with lax fibres

and those addicted to alcohol bear a peculiar susceptibility to shock.

Hæmorrhage is the most pronounced cause, particularly if venous, as then the equilibrium of the vasomotor mechanism is too suddenly deranged.

Two distinct types are recognized: prostration with indifference, and prostration with excitement.

Peritoneal absorption of septic material invariably terminates fatally through shock before evident manifestations of peritonitis have developed.

A subnormal temperature, irregular pulse, superficial respiration, cold and anæmic extremities, and clammy perspiration contraindicate an operation.

The severity of operative shock largely depends upon the length of time in the performance of the operation, and the duration and degree of the anæsthesia.

Shock may to a large degree be prevented by any counter-irritation applied to the extremities.

Brandy *per os* and morphine subcutaneously before operating are imperative precautions toward prophylaxis.

The main treatment consists in stimulating the vascular system and to preserve the animal heat and supply artificial heat to the body.

In acute hæmorrhage or other excessive anæmia an infusion of normal saline solution is prudently indicated.

Ether Narcosis by the Rectum.

This method of inducing anesthesia is better in operations on the head, face and neck according to Eustorjio Calderon in the Pacific Medical Journal for March.

The ether is vaporized by water the temperature being regulated by the operator.

The author's apparatus consists of a cylindrical vessel containing about two quarts of water, having on the inside a tube which commences at the bottom passing up and out, connecting with a small funnel. Opposite this and on upper wall is an opening and tube to let out the overflowing water. Between these tubes there is on the wall a cut one and a half inch wide, running almost the whole length of the vessel and hermetically sealed by a glass plate; behind this a thermometer is attached. A small device inside the vessel supports the ether flask. The cover has another opening in center, through which extends a rubber tube joined to the ether flask, about two feet long; to this tube is attached a faucet and hard rubber nozzle, the latter to be inserted into the rectum. Pouring into the vessel and through the fun-

nel water of 105 deg. Fahrenheit, the ether fumes are perceivable coming through the nozzle after opening the faucet; the etherization can then begin. At a lower water temperature the ether would evaporate very slowly, and at a higher one it would boil.

The bowels should be opened the night before and a water enema given, the enema to be repeated an hour before the operation.

The important point is to keep the water at 105 so that the ether is properly evaporated. He reports a case in which this method was used, complete anesthesia being induced in five minutes. The operation lasted 20 minutes and during that time the faucet was closed twice to be reopened when the patient showed signs of returning consciousness. The effects passed off in about an hour and there was no diarrhea or other displeasing rectal symptoms.

The Justus Test in Syphilis.

This test which is the diminution in the amount of hemoglobin of a person suffering from the first stage of syphilis, is the subject of some investigations reported by Mark A. Brown and Geo. P. Dale in the Cincinnati Lancet-Clinic for March 24th. After an examination of fourteen cases they come to the following conclusions:

That the test is not always reliable, though present in many instances.

It is occasionally present in diseases other than syphilis, and in which active syphilis can be excluded.

That these exceptional diseases are characterized by great hemoglobin anemia.

That it is necessary to try the test in a series of cases of the essential anemias before claiming it as absolute.

That the low point is not necessarily reached after the first inoculation.

That practically the test is of but little value.

Fatty Heart.

The treatment of this condition is discussed by Th. Schott in the Medical Record for March 24th. His special treatment as given at Bad Nauheim consists of exercises with resistance or self resistance and effervescent running baths. Under this method with dietetic treatment he considers the prognosis of fatty heart as much more favorable than formerly. The favorable effect of the treatment is shown by the pulse becoming fuller, the arrhythmia disappears, and the general appearance of the patient is better. He shows some pulse tracings illustrating the decided character of the improvement.

The Significance of Postclimacteric Hemorrhages.

It is the duty of every conscientious physician to insist upon making a local examination of every woman who has passed the climacteric and comes to him complaining of a colored vaginal discharge, whether she has pain or not, says F. A. L. Lockhart, in the Medical Age for March 25th.

If the patient refuses it is better to withdraw from the case, as after she has learned later on that she has cancer which has progressed too far for any hope of cure, she will probably blame you for not having forced her to submit to being examined. In the majority of cases we will find on examination one of two conditions, either fibroma or malignancy with the chances in favor of the latter. If the case be one of carcinoma the uterus will be more or less enlarged and hard without any other alteration in the cervix than an excessive hardening, if the disease be confined to the fundus. If the cervix be the seat of the disease and this in an early stage, it will be hard and probably somewhat nodular with proliferation of the epithelium which bleeds upon contact.

Another condition occurring at this time of life and which is characterized by bleeding, is simple sterile edometritis of the hemorrhagic variety.

Here the hemorrhage is in the form of a constant oozing instead of gushes of blood, and the fluid is inclined to be dark and mixed with mucus.

The Revision of the United States Pharmacopoeia from a Medical Point of View.

We are all more or less interested in the revision of the Pharmacopoeia for 1900, and J. A. Patton, in the Chicago Clinic for March, offers the following suggestions to the revisers: Reduce the number of galenicals, as their use is decreasing, if possible having but one solid and one liquid preparation of each drug and having them of the same strength respecting the crude drug or active principle.

Standardization with reference to the active principle, if possible, and preparation of the active principles in their full strength.

Solutions should be made as concentrated as possible to allow for their preservation.

Syrups of the active principles should be dropped from the list and some new menstrums or vehicles added.

The dosage should not be authoritative or restrictive, but should be based upon clinical experience. Certain proprietaries should

be given. Drugs of animal origin, antitoxins and serum should be considered.

Separate lists of new and reliable preparations that are not made official should be published and an annual supplement should be printed containing the new drugs that were proven during the year or were considered worthy of proving by the profession.

He favors the preparation of a more practical and useful pharmacopoeia in some form of an abridged dispensatory, so instead of one per cent. of the physicians having a copy fifty per cent or more would use them.

The Therapeutics of Opium.

We have so gotten in the habit of prescribing the coal tar derivatives that opium and its preparations are being neglected, says E. V. Swing, in the Pennsylvania Medical Journal for March.

He is willing to admit that the coal tar preparations are very useful in certain conditions, but in many cases they cannot take the place of opium. To relieve pain, to allay irritation, to check excessive secretion, to support the system, and as a sudorific opium and its preparations are invaluable.

He takes issue with Dr. Crothers, of Hartford, who claims that six per cent. of the physicians in the country are slaves to the opium habit in one form or another and shows that he must be mistaken in his figures. We would never let our patients know what they are taking when we are giving them opium. He concludes that opium is necessary to relieve a severe pain, and is still the safest agent for that purpose. It is indispensable in the majority of diarrheal conditions.

It or some of its derivatives are necessary to combat and relieve coughs no matter what their pathological cause, and in so doing, this relief becomes a potent curative factor.

Displacements of the Uterus.

The major displacement with which we have to contend is prolapsus, says H. C. Crowell in the Kansas City Medical Index-Lancet for March.

The flexions and versions might be termed minor displacements, not always demanding treatment, not always producing symptoms. Many cases need only rest, absolute rest in bed, until the tired and relaxed muscular structure of the pelvic floor may have time to regain tone and the neurasthenic condition be substituted for one of health. In recent cases especially this should be faithfully tried before resorting to operative measures.

In prolapse, rest and massage, the pessary, repair of any injury to the floor may be all that is necessary in uncomplicated cases.

Intrauterine pessaries he only mentions to condemn. Complicated cases will tax the skill and ability of the most expert and oftentimes a hysterectomy must be considered in looking for permanent relief.

Oophorectomy for Gross Functional Nervous Diseases Occurring During Menstruation.

Every case of well-marked hystero-epilepsy or epilepsy occurring only at menstruation should have a carefully done, complete tubo-ovarian ablation at the earliest possible moment, says D. C. Brockman, in the *Annals of Gynecology and Pediatrics*.

He says that he never saw a case of well marked insanity, hystero-epilepsy, or epilepsy occurring only at the menstrual epoch, cured by any form of treatment so long as menstruation continued. Women with bad family history suffering from either of these conditions may continue to grow worse after operations, but even these are frequently cured, while cases with negative family history offer very encouraging prognosis if operated on sufficiently early.

Our cousins, the Alienists and Neurologists, look upon these operations very skeptically, say there is no such thing as menstrual epilepsy, that if there is, it is never cured by surgery, etc., but careful observers and able diagnosticians have repeatedly pronounced these cases epilepsy, and perfectly, permanent cures have been obtained by removing the periodically recurring molimen that excites these explosions.

The Operative Treatment of Antelexion.

W. L. Burrage, in *Boston Medical and Surgical Journal* for March, 8th, lays down the following for his guidance: In antelexion without ovarian or tubal disease, and free from shortened uterosacral ligaments or posterior adhesion, dilatation, curetting and Dudley's amputation of the cervix, with a preference for the former. In antelexion with retroposition and shortening of the uterosacral ligaments or posterior adhesions and without ovarian or tubal disease, dilatation, curetting and division of the uterosacral ligaments by colpotomy and Dudley's operation or amputation of the cervix, with a preference for the former.

Amputation of the cervix is a useful operation where the cervix is very long and also where there is extensive erosion of

the crown of the cervix. In married women in both of the foregoing classes dilatation and curetting without other operation is sufficient, because pregnancy will usually straighten the uterus and stretch the ligaments and adhesions. Should pregnancy not supervene within a number of months, and should the symptoms persist, another curetting and Dudley's operation, with or without division of the ligaments, may be done. In antelexion, with or without retroposition, having ovarian or tubal disease, dilatation, curetting, Dudley's operation, and suspensio uteri, the uterosacral ligaments being divided through abdominal wound if they are shortened and whatever may be necessary done to the ovaries and tubes.

Choice of Operation for the Radical Cure of Inguinal Hernia.

Emmet Rixford, in the *Occidental Medical Times* for March, after reviewing the different operations and their purposes, concludes that the Kocher operation is suitable for those cases in which the canal is only slightly distended and the sac long and narrow. Such cases are frequent in children. The Bassini and the Macewen operation will be most successful in those cases in which the conjoined tendon is found to be firm and well developed. Where the conjoined tendon is a thin, flimsy affair he considers the method of Bloodgood worthy of more extended trial.

After all success will depend as much on the choice of operator as on the choice of operation. He who does a neat dissection, doing a minimum of violence to the tissues, making clean cuts in the right places, is clever in managing bleeding vessels and who makes neat approximation of the tissues by suturing without too great tension, other things equal, will have fewer cases of serious infection, less scar tissue and fewer recurrences.

The Disinfection of School Rooms and Public Conveyances After Exposure To Infectious Diseases.

This very practical subject is considered by Frank Warner, in the *Columbus Medical Journal* for February, and its necessity will be admitted by everyone. As it is necessary to disinfect vehicles after carrying patients suffering from contagious diseases it would seem also necessary to disinfect vehicles used in the transportation of the dead who have died of a contagious disease, and so a hearse should be disinfected immediately after such transporta-

tion. Greater importance should be given to cleanliness of the school-room at all times, with plenty of light and fresh air and when necessary disinfection will be all the easier.

As a disinfectant he thinks nothing better than formaldehyde gas, as it is reasonably certain in its action and is not very expensive.

To make this effective it must be generated quickly and the room should not be too cold. There is little doubt that a large proportion of the infectious germs settle down with the dust on the floor and window ledges, consequently the washing of these with a two per cent. solution of the formaldehyde will come next in importance to the more general disinfection with the gas. A suitable generator is one that will develop a large quantity of gas in a short space of time that the whole of the gas may act at one time on the bacteria of an infectious character.

A New Method of Entering the Abdomen in Appendicitis.

A new and improved method of entering the abdominal cavity in the ileocecal region with special reference to the removal of the vermiform appendix is described by George R. Fowler in the Medical News for March 3rd. Two cardinal points are involved in selecting the site and method of the abdominal incision, first the parts within the abdomen concerned in the operation should be brought readily within reach, second weakening of the walls of the abdomen must be avoided as much as possible.

The incision commences at the upper rounded prominence of the anterior superior spine and is carried almost horizontally to the outer edge of the rectus, from which point it is curved downward and extended parallel with the edge of the rectus for a distance of two and a half inches or more as required by the exigencies of the case. The skin, fat and fascia are divided and the triangular shaped flap with rounded corner dissected and reflected downward and outward, exposing the aponeurosis of the external oblique. The skin and fascia are retracted and the external is divided in the course of its fibers, this is also retracted and the sheath of the rectus exposed and divided.

The rectus muscle and the underlying deep epigastric artery and veins are now retracted strongly towards the median line, the outer edge of the incised aponeurosis being retracted in the opposite direction.

A space of four inches is thus exposed in its transverse diameter.

For the purpose of this operation the remaining structures of the abdominal wall may be considered as one layer and the transverse incision carried directly through these in the direction of the fibers of the internal oblique and transversalis into the peritoneal cavity. The incision is commenced at the inner end of the space beneath the rectus muscle and access gained to the cavity of the peritoneum at this point first; after which with the finger as a guide the section is completed and on retraction free and ready access will be found at the desired point. The transverse incision is closed by a running cat-gut suture including all of its layers. In closing the external oblique aponeurosis care must be taken to include in the suture the incised edge of the sheath of the rectus muscle but the muscular structure itself must not be included. He recommends kangaroo tendon in the external oblique aponeurosis as it is most important that we secure a firm union in this part, the skin is then closed by the subcuticular suture. The advantages claimed for this method are: Ready access to the cecal region and ample room for all necessary manipulation in the class of cases for which it was designed, weakening of the abdominal wall and the liability to surgical hernia are reduced to the minimum, as the important musculo-aponeurotic structures are incised in such a manner as to secure immediate, firm and permanent union and injury to the vascular and nerve supply of the parts involved in the incision is avoided. The author thinks that this incision will give a readier access and a larger working space than McBurney's method without increase in the size of the external incision.

The Inoculation Wound of Lues.

The diagnosis of lues in its earliest stages is as important as it is often difficult, says C. W. Allen in the Medical Record for March 17th. He insists upon the great desirability, if not of absolute necessity, of beginning treatment both local and constitutional at the earliest possible moment, if it is expected to get the best results.

Several of the cases reported the infection followed trauma of various kinds. A bite on the ear was followed by a chancre at the angle of the jaw with swelling of the glands, in another a chancre followed a blow on the bridge of the nose which had been painted over by a "black-eye artist" who moistened the brush in his mouth. In a series of four hundred consecutive cases there were forty-six non-genital inoculations.

The Significance of Earache in Children.

The ear has been more deliberately neglected by the average physician than any other organ, says T. H. Halstead in the Medical News for March 17. In a well written paper he shows that earache in children is generally caused by acute inflammation of the middle ear, either suppurative or catarrhal. Infants and young children may have suppuration in the middle ear without giving satisfactory evidence of pain, or without rupture of the drum membrane. In the absence of other known cause of pain, from which a child is evidently suffering, the first cause to be thought of should be acute otitis media, and this calls for an examination of the drum membrane. It has been shown by examination of the middle ear during life and post mortem, that purulent otitis media is nearly always present in acute infectious diseases of the gastrointestinal and respiratory tracts in young children, especially in gastroenteritis and broncho-pneumonia, to which diseases it probably stands in causative relation. The cause of death in many acute and chronic infectious diseases, in meningitis and in the exanthemata, is the result of unrecognized and untreated abscess of the middle ear. Repeated earaches in children are ordinarily but a sign of acute exacerbations of a chronic otitis media resulting from adenoids. In adult life, so-called catarrhal or progressive deafness is often but a final stage of the otitis media which had its beginning in early childhood when it was due to adenoids and practically curable.

Wounds of the Liver and Biliary Tract.

Four cases of this class of wounds are reported by W. E. B. Davis, in the Alabama Medical and Surgical Age for March.

In the first case a considerable wound was made in the liver tissue in operating for abscess, it was packed with iodoform gauze and the patient made a good recovery. Another case was due to a gunshot wound and in the others gall stones and obstruction to the bile duct.

He says that quarts of fluid may not produce death if there is time for adhesions to form and protect the general peritoneal cavity from the fluid. Symptoms will depend upon the complications and the protective adhesions. If there are protective adhesions there will be only symptoms of localized peritonitis, otherwise death will generally quickly result. Cases have been reported where the patient did well for a few days and then became very ill and soon died, evidently this was caused by

the giving way of the adhesions. From a number of experiments on dogs he shows that small portions of the liver may be removed with comparative safety while in extensive removal the mortality is great. That small quantities of bile may be injected into the peritoneal cavity without harm. That the symptoms of hemorrhage or of perforation may be misleading and therefore exploratory incision is indicated in all penetrating wounds of the abdomen.

Citric Acid in Ozena of Atrophic Rhinitis.

Lewis S. Somers, in the Therapeutic Gazette for March, calls attention to the value of citric acid for the relief of ozena in atrophic rhinitis.

According to his experience the drug is of great value in preventing the fetid odor of this condition. The successful action depends upon its direct application to the diseased tissues and for this reason the removal of all foreign material is absolutely necessary. After its use the ozena usually remains absent from one to two days, and in exceptional cases longer, depending upon the extent and severity of the morbid process. However, it exercises no direct action upon the diseased tissue in the direction of restoration to its normal functions. Unless used at more or less regular intervals its action is but transient, and the ozena speedily returns. To a moderate extent it inhibits scab formation and is an important addition to the therapy of fetid rhinitis, as it enables the rhinologist to successfully combat the chief and often the only complaint of the patient—ozena.

Tuberculosis: The Dawning.

Tubercle bacilli do not cause tuberculosis primarily, says H. H. Spiers, in the Cincinnati Lancet-Clinic for March 17th, but they enter secondarily and the constitutional disease allows the natural entrance and growth of the germ. On this topic the author challenges controversy.

He concludes that the danger from infected milk is very much overestimated, and he is somewhat skeptical about the tuberculin test in cattle, as tuberculin only determines the presence of growing bacilli. He says that tuberculin has no value in diagnosis and no certain value in differentiation of the first stage and is sometimes dangerous. He winds up by saying that the first stage of the disease is caused by the suspension of atmospheric influence, whatever that may mean, and so if we can only keep the atmosphere from being suspended, by tying a brick to it, we will be all right.

Steam in the Treatment of Uterine Disease.

The treatment of chronic hyperplastic senile endometritis, putrid abortion and puerperal sepsis by steam is discussed by F. W. Johnson, in the Boston Medical and Surgical Journal for March 15th.

He uses the ordinary steam throat atomizer for generating the steam. A hard rubber tube, 8 inches in length, the size of a No. 18 French bougie, conically pointed at one end, is connected with the boiler by soft rubber tubing.

After preparing the patient and tube, the cervix is dilated and the cavity wiped dry. The uterus is then steamed through a small-sized uterine speculum for thirty seconds and the patient kept in bed for four to six days.

The steam as it leaves the boiler is 212 deg. F., but inside the uterus it is 192 deg. F. to 212 deg. F., dependent upon the amount of moisture in the uterus. Unless it is desirable to obliterate the cavity the steam should not be used under pressure or for longer than one minute.

In puerperal cases the steam is more thorough and safer than the curette.

Thirty-one cases are reported showing the good effect of steam in disease conditions of the uterus.

A Means of Accounting for Gauze Laparotomy Pads.

In view of the fact that a prominent surgeon in the West is now in the midst of a suit for damages for leaving a gauze pad in the abdomen of a patient, an article in the Medical Record for March 10th, by V. C. Pedersen on this subject will be of interest of a personal nature as well as on behalf of the patient. He suggests the following means: The usual gauze pads to have a tape from twelve to fourteen inches long securely sewed to a corner or edge; "tally snaps" or their substitutes, "tally rings," "tally checks," or artery clamps; "keepers," of either continuous or divided ring, continuous or divided oval or fenestrated bar form. If desired any form of tally may be stamped with a number. The number of pads and of tally snaps are known before the operation and recorded. Two keepers are needed, one for each margin of the wound, and each pad is handed to the operator with the tally snap securely tied to its tape, while the operator is packing the pad away the assistant catches the tally on the keeper. When a pad is removed from the field the tape is cut close to the tally snap which remains on the keeper till after the operation, when the number of

the soiled pads and tally snaps should agree. The great essentials of this plan are, that after a body cavity is opened no pads are within the operator's reach except such as have tapes and snaps attached, and each snap is promptly attached to the keeper.

Any one desirous of trying this method with very little outlay can buy several dozen large horse-blanket safety pins to use as tally snaps and make for himself any pattern of keeper he likes. Strips of galvanized, square mesh, railroad wire-fencing with meshes one by one inch will make excellent bar-form keepers. Ordinary large sized safety pins are almost too small for safe use as tally snaps.

Care of the Intestines After Abdominal Section.

According to L. Grant Baldwin, in the American Journal of Obstetrics for March, the bowels should be moved by the end of the first twenty-four hours after an abdominal section. This he accomplishes by the administration of salts prior to anesthesia, saline enemas, and the administration of from ten to fifteen grains of calomel in capsule twelve hours after the operation. He is thoroughly opposed to giving calomel to these cases in triturates or in small powders, as he thinks they are more apt to upset the stomach in that form. The calomel is followed about six hours later by a teaspoonful dose of salts dissolved in hot water and this is given regardless of nausea or vomiting.

At first evidence of distension of the large intestines, even though it be but a few hours after operation, he uses the high enema which is repeated until gaseous or fecal movements have been secured.

He is confident that proper attention to the bowels will save many a seemingly desperate case.

The Treatment of Epididymitis.

A very simple and effective plan of treatment for this condition is outlined by H. M. Christian, in the Therapeutic Gazette for March.

The bowels are opened freely every day with saline, a leech to the affected side, continuous moist heat for forty-eight hours, then a twenty per cent. ointment of guaiacol applied every other day when at the end of the sixth day the swelling and pain has disappeared. The following ointment is then substituted for the guaiacol and continued until the patient is well: Ung. hydrarg., ung. balladon., ichthyol, lanolin, equal parts.

Chronic Heart Disease and the Scott Method of Treatment.

Six cases of chronic heart disease successfully treated by the Scott method are reported by Victor Neesen in the New York Medical Journal for March 10th. The treatment of Scott consists essentially in baths and exercises, but the particular kind of baths and the proper kind of exercises are important. The baths have all gradations of strength from the weakest (one per cent. of salt) to the strongest (the flowing carbonic-acid bath). The exercises consist of slow muscular movements which cause an increased flow of blood to the muscular structures and the extremities, and whenever the exercises raise the pulse they are doing harm. In acute cases, especially when fever exists, the treatment is of course contraindicated. In advanced cases of arteriosclerosis and aortic aneurism the greatest care and skill are essential to avoid an untoward result. He reports sixty cases of advanced heart disease treated by this method with the very best results. Three were of mitral insufficiency, two of myocarditis and angina pectoris, the other being one of aortic insufficiency with relative mitral insufficiency, hypertrophy and dilatation.

The Climate for the Invalid.

In the Dietetic and Hygienic Gazette for March, under the title of "Man and the Mountain," J. Warren Achorn says that for those in New England afflicted with chronic or climatic ills, as chronic bronchitis, asthma, incipient tuberculosis, chronic rheumatism, chronic Bright's disease, neurasthenia and insomnia, the high sand hills of North Carolina have done the most. Further, he says, there is nothing beautiful about this region except for those who can see beauty in fruit culture, in sand hills grown with black jack and long leaf pine trees that look as though they had a hard time making a living. There are no mountains there with cascades down their sides, no lakes that glisten like jewels, no mighty rivers flowing to the sea, no valleys filled with huge trees that reach far up the mountain side; the whole thing is simply a rolling sand ridge, twenty miles long, ten miles wide, and seven hundred feet high, but so blessed with soft sweet air, pure water, dry hard sand, and bright sunshine, as to relieve in marked degree the patients sent there.

Southern Pines, Pine Hurst, and Pine Bluff are beautifully sterile, at least, if not surrounded by the greatest beauties of nature. There are no song birds there, for

there are no bugs for them to live on. The climate is semi-tropical and anti-nervous. For those who seek relief from climatic ills incident to New England during the winter and spring months, this is probably the best section east of the Mississippi.

Treatment of Suspected Specific Primary Lesions.

William F. Breakey, in the Physician and Surgeon for February, says that cauterization of the initial lesion is not to be advised.

Cauterization and excision in the great majority of cases complicate and render more difficult the diagnosis, and are not only needless, but detrimental to the favorable course of the disease by delaying appearance of secondary symptoms, leading to a false confidence in the patient and often in the physician, that the patient has a noninfecting chance, or that his syphilis has been "aborted" by a "rapid cure." On the strength of either assumption persistent systematic treatment is not followed and at some later time, it may be months or years, he breaks down from the suddenly active development of latent foci of disease.

Treatment of Pneumonia.

According to E. Hodley, in the Indiana Medical Journal for March, we may about or materially lessen the severity of this disease if the first stage is recognized early and treated promptly.

For this stage of pneumonia he recommends the hot jacket poultice, carbonate of ammonia and morphia hypodermically. The ammonia he considers preferable to strychnine or whisky.

If pain is allowed to exist or continue, it is favorable to continuance or increase of congestion, hence the indication for morphia.

For the second stage, digitalis and strychnine are to be used with inhalations of oxygen. Expectorants are useless and detrimental and same can be said of blisters.

Pin Transfixing the Eye.

An interesting case of a pin transfixing the eye is reported by Christian R. Holmes, in the Cincinnati Lancet-Clinic for March 31st.

The pin entered at a point 2mm. below the horizontal line and 5mm. from the inner corneal margin and passed directly backward emerging at the posterior surface of the eyeball. It was removed under cocaine with some difficulty, as the pin had been bent in the shape of a fishhook.

There was hemorrhage or escape of humor; some temperature on the day of operation, otherwise the patient made a perfect recovery, as an examination twenty-two months after the operation showed a perfectly normal eye so far as function went.

Idiopathic Pneumohemothorax.

A case in a male age 34 is reported by Elisha S. Boland in the Boston Medical and Surgical Journal for March 29. The patient was in usual health when he felt a pain about the waist on the right side, got up and stretched himself vigorously and went to bed. After a few hours he awoke with severe pain in the right chest and a feeling of wind escaping there.

Could not sit up or turn without great pain and dyspnea, pulse and temperature elevated. After 22 days, aspiration brought away 34 ounces of dark red blood and fifteen days later a second operation gave 39 ounces of the same kind of blood.

The aspirated blood was liquid and remained free from coagulation after exposure to the air. It was about as dark as menstrual blood, was free from odor and remained homogeneous after standing in column.

This case suggests: (1) We can have (practically) a primary pneumohemothorax; (2) that without diagnostic aspiration we cannot be sure of the nature of any pleural effusion; (3) that aspiration may precipitate an influx of air into the pleural cavity even if the lung is not touched by the needle; (4) that the pleural cavity can unaided take care of aseptic blood as well as of air.

Gastric and Duodenal Ulcers.

The relation between gastric and duodenal ulcers is so close that they are discussed together by Thomas E. Satterthwaite in the Medical Record for March 24th.

In taking up the etiology he says that the average in women is 27 years, in men 42 years. Out of 234 cases, 160 were female, 74 male.

The real cause of this condition is often in doubt among those assigned are mechanical compression as by corsets, belts, etc., injuries of any kind to the stomach, tuberculosis, anemia, menstrual disorders, endocarditis, atheroma gastritis and others. Syphilis, typhoid and bacterial infection are also prominent among the causes. However the most important agent in the production of gastric ulcer is the action of the gastric juice when the vitality of the stomach wall is impaired.

The ordinary symptoms are localized pain after eating, vomiting, hematemesis or me-

lena or both. Thirst and flatulence are also important.

In the majority of cases the condition involves adjacent organs according to Brinton in 70 per cent., of the cases.

The prognosis is doubtful though patients may get well without treatment.

In the treatment we must endeavor to relieve immediate symptoms and to cure the ulcer.

Rest in bed, no food or water by the mouth, ergot, morphine, cold to the stomach, salt solution, feed by the bowels is the proper treatment for hemorrhage. At the end of three days a little liquid may be given by the mouth and at the end of the week put on regular diet but kept in bed.

The stomach tube should never be used in gastric ulcer.

In some cases a surgical operation is the only possible resort if life is to be saved.

Apomorphine as a Hypnotic.

At first thought we would suppose that apomorphine would do any thing else but make a patient sleep, but according to Charles J. Douglass, in the New York Medical Journal for March 17th, there is no hypnotic in our materia medica that is at once so prompt, so safe and so sure.

One-thirtieth of a grain hypodermically is the average hypnotic dose.

Under ordinary circumstances this dose should be administered when the patient is in bed or quite ready for bed or he may be overtaken with drowsiness or nausea in some cases before he can undress.

It acts in from 5 to 25 minutes and may be repeated in 30 minutes if necessary.

Several cases are reported showing its wide range of usefulness as a hypnotic.

The Pathognomonic Sign in Colles' Fracture.

Martin W. Ware in the Medical Record for March 31, says that the silver-fork deformity is encountered in less than 10 per cent. of cases of fracture of the lower end of the radius. Consequently this sign is not of much use in the diagnosis of this injury.

In its place he mentions a sign which is always present, namely the elevation of the styloid process of the radius.

Normally the ulnar styloid is on a higher plane than the radial which can be easily demonstrated by placing the forefinger and thumb on the two styloid processes and connecting them by an imaginary line.

In estimating this sign the normal wrist must always be taken in comparison.

Fetal Sarcoma.

A case of congenital sarcoma of the scalp with insanity of pregnancy in the mother is reported by Helga Rudd in the *Woman's Medical Journal* for March.

The mother was 35 years of age, had several healthy children with normal pregnancies, became insane at the fourth month of the present pregnancy and was admitted to the Insane Asylum for treatment. The child was delivered with some difficulty at term, breech presentation, the trouble being with the after-coming head.

Attached to the right side of the head was a large tumor weighing 14 ounces which on microscopical examination was found to be a spindle celled sarcoma.

The head was of fair proportion, bones firm, sutures and fontanelles normal.

The puerperium of the mother was uneventful except that the mental condition remained about the same and two months after delivery she died from exhaustion.

An interesting question arises regarding this unusual scalp tumor of the fetus. Could the pathological conditions as found in mother and child stand in any causal relation to each other, and if so, which depended upon the other? We know that traumas play an important role in the etiology of tumors, and we can see how the mother's violent actions might easily have inflicted repeated injuries to the fetus in utero. On the other hand in the absence of any apparent cause for the mother's insanity, is it unreasonable to assume that the fetal morbid growth in some subtle way might have caused the mental disturbance of the mother? Insanity of pregnancy is somewhat rare and according to Claustan usually occurs in first pregnancies. This woman had passed safely through several pregnancies and in a normal mental state.

Should a Colostomy be done for cancer of the Rectum.

This question is discussed by Joseph M. Mathews in the *New York Lancet* for February. In passing he says that we may do either excision, dilation, curettement, incision or colostomy but he is not very enthusiastic over the latter treatment except under certain conditions.

And so in the majority of the cases of cancer of the rectum he advises against the operation. When the growth is sufficiently low down in the rectum to be circumscribed it should be excised.

Gradual dilatation or division of strictured portion is much preferable to a colostomy. But colostomy is fully justified in cases where total, or nearly total, occlusion has

taken place at a height in the gut which precludes its division.

Opium is much to be preferred to a colostomy, as a means of quieting pain resulting from cancer in the rectum.

The Panas Operation for Strabismus.

Thirty-six cases treated by this new operation are reported by D. B. St. John Rosa in the *Post Graduate* for March.

This operation as originated by Prof. Panas consists essentially of stretching the muscles before division, and of dividing the interni or externi, as the case may be one of convergent or divergent strabismus, at one time. A perfect result was secured in 32 out of the 36 cases, and in the four cases a final good result is considered certain.

Some operators entertain a dread lest an over-effect be produced by the stretching of the muscles and their simultaneous division, but these 36 cases, together with the 250 reported by Panas, should dissipate this fear.

What May be Accomplished by Electricity in Dysmenorrhea.

In dysmenorrhea due to certain conditions this much abused agent, if used in a rational and scientific manner, with a definite purpose in view, is capable of doing very much good, according to Augustin B. Goelet in the *International Journal of Surgery* for March.

A permanent cure may be obtained from its use in dysmenorrhea due to stenosis or obstruction in the canal with or without flexion, also in cases due to anemia and impaired general nutrition and in those cases caused by nondevelopment of the generative apparatus, chiefly the uterus and ovaries, if instituted at an early age.

When the dysmenorrhea is due to so-called catarrhal endometritis, which is usually a chronic hyperemia, a permanent cure may be effected by the use of electricity.

For the purpose of overcoming obstruction in the canal, whether associated with flexion or not, moderate negative electricity is the means to be used.

The galvanic current for this purpose should not exceed ten milliamperes in strength, and the duration of the application should be three to four minutes.

In dysmenorrhea due to ovaritis and salpingitis, particularly where there is much sensitiveness to digital pressure in the vagina, the treatment should begin with bipolar faradization through the vagina with the most sedative current obtainable.

These applications are repeated every day for fifteen or twenty minutes until the pain and sensitiveness are relieved, when the negative electrolysis is used as in the other cases.

When the condition is due to anemia and impaired nutrition, local applications to the uterus are not required, but instead the vigorous application of static electricity is used as sparks to the spine and especially to the sacrum, sparks to the hypogastrium and the application of the static breeze generally.

Eclampsia.

Four successive cases of eclampsia that failed to show any reaction for albumin either before or after the attack are mentioned by J. Preston Miller in the Medical and Surgical Bulletin for February.

The following premonitory symptoms are considered important: high arterial tension, headache of an obstinate type often limited to one side, irritable temper, physical and mental lassitude, constipation, excessive vomiting, marked salivation and perhaps jaundice. With such symptoms put the patient on absolute milk diet, plenty of fresh air and water, keep the surface of the body warm, and give calomel, colocynth, aloes and cascara or citrate of magnesia. Dieretics should be used carefully and sparingly. In regard to the termination of pregnancy in threatened eclampsia no fixed rule is laid down and the physician must exercise his own judgment. If the symptoms continue to grow steadily worse in spite of treatment, the safest rule is to terminate the pregnancy.

In the convulsive stage he recommends chloroform, chloral, and venesection. Veratrum viride and morphine are also useful, and in asthenic cases strychnine and nitroglycerine.

Place something between the teeth to prevent the patient from biting her tongue.

For the bowels use croton oil followed by an enema of turpentine, salts and glycerine in water.

Hot air bath or wet pack to the skin.

Is Fever a Conservative Force?

This question is answered in the negative by J. W. Embree, in the Texas Medical Journal for March.

Fever means loss, waste and injury and as such cannot be a conservative process. There is no temperature at which the functions act better than at the normal and when elevated above this there is destruction.

The range of a fever temperature cannot burn out the pathogenic microorganisms, but on the contrary we find that fever is the temperature of their most productive growth. A sufficient degree of temperature to destroy the organism would in like manner destroy the cells of the body.

He is convinced that by any means we are able to maintain the temperature at normal or thereabouts without depressing the heart, we would render our patients more comfortable, all the functions would carry on their work better, the disease would be shortened and the mortality lessened.

Hydrotherapy so far has produced the best results, particularly in typhoid fever and pneumonia. He is perfectly conscious of the fact that fever is only a symptom, but until we can treat the cause it is one of our most important symptoms and we are forced to treat most of our cases symptomatically.

Some Points in Therapeutics of Heart Disease.

The indications for treatment differ widely in the diseases of the heart, according to W. H. Thompson in the Medical Record for March 17th.

In the acute inflammatory states, rest is the all important indication. When the heart is beginning to fail in acute cardiac inflammation, the condition will only be aggravated by administering heart stimulants. The proper treatment is leeches to the precordium, then poultices of flax-seed meal with extract of hamamelis and laudanum poured on just as the cataplasm is applied and then covered with oiled silk and kept covered without a single exposure night or day.

Aconite takes the lead of all other medicines in acute inflammations of the heart.

In acute parenchymatous degeneration as in diphtheria use alcohol to the limit, strychnine, caffeine and above all camphor hypodermically in sterilized oil (8 grains of camphor to 20 of oil) as often as necessary. Digitalis is not indicated and is dangerous in such cases.

After severe rheumatic attacks, prolonged rest in bed and aconite may prevent an irremediable damage to the heart.

In myocardial degeneration after middle life, the treatment is general and every organ in the body must come to the help of the diseased heart.

In closing he emphasizes the fact that the physician should not forget that all nerve medicines such as digitalis, strophanthus, nitroglycerine, strychnine, caffeine, sparteine, and the rest can never be other than temporary makeshifts. All that they can

do is to relieve symptoms, and that only for a while. They may be of great service in warding off immediate dangers, and as adjuvants to the real remedies which act upon nutrition; but if a progressive degenerative process is going on, they are powerless to cure it. One of the chief reasons for ultimate failure in the treatment of many chronic heart diseases is to be found in too great a reliance on such drugs. Permanent improvement is to come from other agents and measures which restore nutrition rather than stimulate function.

And fresh air is the first of these, iron, mercury, the iodides and arsenic are also useful. The iodide of sodium should be given in preference to the potash salt.

The Static Current in Paralysis.

The electrostatic treatment of some forms of paralysis is discussed by W. B. Snow in the *Postgraduate* for March.

Except when syphilitic conditions are present, poisoning or pressure which the surgeon may relieve, the treatment of paralysis is apt to be symptomatic. In connection with any specific treatment, attention to the local condition is indicated as well.

He considers it an established fact that the static current will restore nutrition and lessen hyperemia and congestion.

Large muscles should be treated with long sparks, and short muscles with short sparks.

He concludes that in all cases of paralysis the nutrition of the parts should be maintained by an agency that will preserve the balance of the nutrition of exercise and the nutrition of restoration that degeneration may be retarded.

Such agents must be searching, potent, and of a character that will induce no chemical or unfavorable alternative action of the tissues.

Electrostatic sparks and currents, having high voltage and infinitesimal quantity or amperage, exercise the parts, promote metabolism, and thereby maintain the parts in the best condition when systematically applied.

When the character of the lesion does not preclude the possibility of recovery, the early treatment will prevent degeneration, hasten recovery, and give excellent final results.

There is no contra-indication at any state of a paralysis for the intelligent administration of electrostatic treatment, because it lessens hyperemia and congestion, relieves nervous irritation, and tends to restore a normal equilibrium of the system in general, and of the parts affected.

The Treatment of Hemorrhoids.

W. A. Kickland, in the *Denver Medical Times* for March, prefers the ligature.

In external piles covered by skin, the skin is cut through around the base of the tumor which is then tied with a fine paraffined silk ligature placed in the cut. The pile is then cut off leaving only enough stump to hold the ligature in place. In internal hemorrhoids the ligature is placed around the mucous membrane, without the incision, by threading it on a needle, transfixing the tumor at the base and tying each half separately and lastly together.

The bowels are moved on the fourth day.

He condemns the injection method as unsafe, the Whitehead and American operations as too severe for the conditions present.

The ligature he considers the easiest, quickest, safest, and in every way the best method.

He reports no experience with the clamp and cautery.

Diagnosis of Urethral Diseases.

In speaking of simulated stricture, Ferd. C. Valentine in the *International Journal of Surgery* for March, makes the following points in the differential diagnosis of stricture and urethrospasm.

In exploring with the bougie-a-boule it is arrested in the penile urethra in stricture while in urethrospasm it is most frequently arrested just before the membranous portion. Fingers on the perineum feel the bougie arrested; the finger then inserted into the rectum does not feel it but in spasm the fingers on the perineum before the inferior extremity of the pubic arch do not feel the bougie's head but the finger then inserted in the rectum does feel it arrested at the membranous portion. In stricture, bougies of decreasing calibres successively inserted penetrate more deeply into the urethra in accord with their decreasing calibre while in urethrospasm bougies of all calibres sink to the same depth. On withdrawing the instrument its sharp shoulder distinctly leaps over the obstacle giving a more or less distinct twitch in accord with the size and character of the stricture but in spasm the withdrawal of the bougie conveys the sensation that its head is grasped or that it passes through a species of increasing narrowings and then widenings, as it traverses the parts spasmodically contracted.

On withdrawing the bougie in stricture we feel the distinct, firm resistance of the hardened tissue while in spasm the sensation is that of dilating soft and supple tissues.

The Mosquito as a Definite Host in Malaria.

The important part taken by the mosquito in the causation of malaria is now established, that is so far as certain species are concerned. Wm. B. Burns in the *Memphis Medical Monthly* for March, after reviewing the history of the relation of the mosquito to malaria, lays down the following rules of their destruction.

Of the whole period of the cycle of development of mosquitoes the stage in which they are most easily destroyed are those of larvæ and of the aerial mosquito; and larvæ are most easily killed the younger they are.

To kill the larvæ, among numerous substances experimented with, there will be, in decreasing order, culicidal action in: (a) Mineral: sulphurous oxide, permanganate of potash with hydrochloric acid, common salt, potash, ammonia, carburet of lime, corrosive sublimate, chloride of lime, the bisulphites, sulphate of iron, copper, lime, bichromate of potash and sodium sulphite. (b) Organic: powders of the unexpanded flowers of chrysanthemum, tobacco, petroleum and oils, formalin, cresol, certain aniline colors (gallot, green malachite), coal tar. Owing to the great cost, the vegetable powders, petroleum and aniline colors will be those excluded.

To kill aerial mosquitoes, we have odors, fumes and gases. Among the odors are: turpentine, iodoform, menthol, nutmeg, camphor, garlic; among the fumes are tobacco, chrysanthemum powder, fresh leaves of eucalyptus, quassia wood, pyrethrum powder; among the gases, sulphuric oxide. It is however to be noted that for these fumes to exercise their culicidal action they must fill or saturate the whole ambient, otherwise they produce only apparent death, or at most only a culicifugal action, which sometimes in houses may be useful in protecting man from being bitten by mosquitoes, and preventing the latter infecting him when they have sucked the blood of malarious persons.

The problem of the destruction of mosquitoes is experimentally soluble; but practically it will only be so when economic interests desire it. In this latter sense it is remarkable that the old larvicidal use of petroleum has not become much diffused in those places where it is very cheap. The chrysanthemum plants might be grown on a large scale, this making the malarial place itself produce that substance which frees it of the mosquitoes that infest it.

The opportune season for killing the larvæ is the winter when they are in least numbers in the waters, and new generations are not born; this also is the season for their

destruction in houses, for they come here for a warmer abode. Their habits and places of nesting should be studied to this end. This may not be accomplished on a large scale as easily as some boast; nevertheless, after the treasures spent by nations and individuals for preserving vines and vegetation from the oridium, the peronospora and the phylloxera, we may hope that something may be done for protecting the life of man from the mosquitoes of malaria.

Pulmonary Tuberculosis.

In speaking of the treatment of this condition, S. Edwin Solly, in the *International Medical Magazine* for March, says that the central fact is hygiene and while climate is of secondary importance to hygiene and supervision, yet when applied with intelligence and knowledge, change of climate is the most powerful therapeutic agent we possess in the permanent arrest of the progress of phthisis. But climatology is not taught and studied as it should be and so, too often the doctor advises the patient to travel that he may not die on his hands.

The forms of phthisis, in considering the question of climatic change, are best grouped under the three heads of tuberculous, catarrhal, and pneumonic, admitting, of course, that all are tuberculous, and most have more or less catarrh.

The tuberculous covers those cases in whom the tuberculosis, pure and simple, seems to overshadow the other conditions. These have usually a marked feebleness of resistance to infection, and generally an inheritance of the disease, or of the tendency toward it. In these cases it is found quite frequently that there is anemia and imperfect development of the heart and lungs.

The catarrhal group comprises those who are subject to frequent catarrhal attacks, and whose histories show tuberculosis following one of them, and in whom exacerbations are generally preceded by a recurrence of catching cold. In these, obstructions, or defects of the nose or nasopharynx are very common, and attacks of bronchitis, probably as a result of them, are frequent. They have a tendency, owing to their feeble reaction, more often to chronic congestion than to inflammation.

The pneumonic group embraces those cases in whom an inflammatory process has usually preceded a tuberculous invasion, and in whom the disease advances by leaps and bounds following recurrent catarrhal pneumonias. During the intervals there is often decided, but too usually only temporary, improvement. The persons of this group are of the erethistic temperament, and especial-

ly subject to nervous irritability and high temperatures.

The type, of course, may vary with the stage of the disease; and a climate beneficial at one period may not be at another. Change of climate also, purely as change, is often demanded. The tuberculous as a rule do best in high climates which are sunny, but in which the air is dry and cool, rather than warm. The catarrhal cases also do, on the whole, best in a high climate, where the air is also sunny and dry, but preferably warm to cold. The pneumonic group are better off in a climate of medium elevation, with plenty of sunshine, moderate warmth, and dryness, but not on the excessive dryness of high plateau or the low desert.

Injuries About the Shoulder at Birth.

Injury to the brachial plexus is by far the most important factor according to J. S. Stone, in the Boston Medical and Surgical Journal, for March 15th., while direct injury to the joint and bone is of only secondary importance. The following points are brought out in the paper: True congenital dislocation of the shoulder, that is defective development of the scapula and head of the humerus, is of extremely rare occurrence. True traumatic dislocation of the shoulder at birth or in early infancy is of extremely rare occurrence. Obstetric paralysis, which as has been long recognized, is of Erb's type, is due to a stretching and in some cases a rupture of the two upper roots of the brachial plexus, as is proved by anatomical study.

Obstetrical paralysis is usually recovered from entirely in the course of a few weeks or a few months. If recovery does not occur within this period the prognosis is very much more serious, although improvement may occur even after the lapse of many years.

After an infant's arm has been held in the position of inward rotation for some months the posterior part of the capsule becomes so stretched as to permit the head of the humerus to slip out of the glenoid cavity posteriorly, while the anterior portion of the capsule and the pectoralis major are shortened. This backward subluxation is always made easier by a tearing and stretching of the posterior part of the capsular ligament through the same trauma which stretched the upper cords of the brachial plexus.

A dislocation of this sort is easily reduced by measures which stretch the inward rotators of the arm, but when thus reduced it is held in place with extreme diffi-

culty, because the cause which originally produced the dislocation, that is, the unopposed action of the inward rotators, is still present.

Any abnormality in the shape of the head of the humerus or in the glenoid in a case accompanied by paralysis or lack of development of the deltoid and supra and infra-spinatus muscles is probably secondary to the paralysis, and if accompanied by a dislocation is not to be looked upon as primary cause of the dislocation. Lack of bony development of a paralyzed arm may become very marked after the lapse of years, and this lack of bony development is not in any way to be regarded as proof of a congenital defect.

All early cases of obstetrical paralysis are to be treated by sling or bandage which will support the paralyzed muscles and prevent dragging on the ligament and injured nerves.

In cases which persist without improvement there is reason to hope that surgical intervention looking to a union of the torn ends of the fifth and sixth cervical roots at a point from a quarter to three-quarters of an inch from their emergence from the canal may be of benefit.

The subluxation resulting from the paralysis is to be treated by stretching or section of the contracted muscles and ligaments, by osteotomy, arthrodesis, or muscle transfer, according to the conditions present in each case.

Excision of the Shoulder Joint.

A case in a woman, aged 30, is reported by A. R. Shands in the Virginia Medical Semi-Monthly for February 23d.

At the age of five years the patient received a severe injury in the left shoulder which soon developed into a purulent synovitis.

After discharging for some time the opening closed, but when between 8 and 9 years old abscesses began to form over the axilla, shoulder and arm. These were treated conservatively for years, during which time many small pieces of necrotic bone came away.

Operative measures were advised and accepted, and seven and one-half inches of the humerus was excised through a longitudinal incision. The periosteum was dissected back before sawing off the bone.

The glenoid cavity was thoroughly curetted and all the diseased bone removed.

The wound was closed with drainage, and healed firmly in four weeks, when it was put up in plaster. There was little or no shock following the operation. Hemor-

rhage was profuse, requiring many ligatures and hot water freely.

The patient made a rapid and uneventful recovery.

The tissues above the proximal end of the humerus contracted several inches, considerable bone formed from the periosteum which was left in and this stiffened the arm considerably, giving the patient a very useful arm.

Gonorrheal Rheumatism.

A. Wang, in the Medical Dial for March, gives the following characteristic features of gonorrheal rheumatism which distinguishes it from ordinary rheumatism.

Urethral inflammation, no history of cold or exposure.

Rarely observed in women.

Non-febrile, or less so than rheumatism.

Symptoms limited to a small number of joints.

Less movable than simple rheumatism.

Local pain relatively moderate, but very indolent.

Frequent tendency to hydrororthrosis.

No sweating.

Urine not modified.

Blood not furnishing a marked buffy coat, not showing such excess of fibrin as in simple rheumatism.

Cardiac complication not so common.

Complications of special ophthalmia, inflammation of sheath of tendons.

Relapse when attacked by gonorrhea.

Prolapse of the Bladder and Uterus during Pregnancy.

A case of pregnancy in a syphilitic with prolapse of the bladder and uterus, is reported by Thomas S. Bullock in Obstetrics for March. He induced premature labor at the eighth month, the fetus was dead when born. It was a breech presentation with the cord around the neck. The placenta was adherent and it was necessary to remove by hand.

The puerperium was uneventful.

Electrical Treatment of Hemorrhoids.

Two cases of hemorrhoids, treated by galvanism, are reported by John V. Shoemaker in the Medical Bulletin for March.

He used the negative pole of the galvanic battery as it increases the diameter of the blood-vessels as well as of the rectum and with good results.

He then considers it the best treatment for the recession of a protruding and necessarily somewhat strangulated hemorrhoidal mass.

Bichromate of Potash Poisoning.

A case in which a comparatively small dose produced unmistakable toxic symptoms in a strong, well-nourished adult is reported by J. D. Thompson in the Regular Medical Visitor for March.

The drug was given for atonic dyspepsia of a very chronic type after everything else had been tried with only temporary benefit.

The dose was one-fifth of a grain in a dram of water. There was some nausea shortly after taking the first dose, but not sufficient to cause alarm. About an hour and a half later the patient was found nearly exhausted from continued vomiting, part of which was streaked with blood. Pulse feeble and rapid, marked pallor and clammy perspiration.

Raw eggs and digitalin were used and the next day the man was up and about. The doctor adds in a note that the dyspepsia was markedly improved by the ordeal.

Tetanus.

Four cases of this disease with one recovery are reported by T. A. Mitchell in the Cincinnati Lancet-Clinic for March 3d.

He concludes that, as with many fevers, so with tetanus, it has a definite course to run and so an important indication is to support the patient's strength and vitality in every possible way.

He recommends constant watching day and night, absolute avoidance of all causes of excitement or disturbance as drafts of cold air, the preservice of equable temperature, and as for drugs opium and chloral hydrate.

Of all the remedies that he has used more reliance is placed upon chloral hydrate than any other, together with sustaining liquid diet and open secretory functions.

Hospital Treatment of Typhoid Fever.

The hospital treatment of typhoid fever may be classed under three general plans says Frank S. Johnson in the Medical Age for March 10th. Expectant, intestinal antiseptic, and heat reduction.

After a careful study of the statistics of a number of the more important hospitals for several years past, he concludes that under expectant treatment the mortality rate is nearly 20 per cent., varying widely however, in different epidemic or endemic conditions. Under intestinal antiseptic the mortality was reduced to two-thirds of the natural expectancy. Under bath treatment or bath and antiseptic treatment combined, the mortality has been reduced to about one-third of the natural expectancy.

Operation for Hernia.

Jos. C. Bloodgood reports 459 cases of hernia in the Johns Hopkins Hospital operated on from June 1889 to January 1899 and the report is abstracted by M. B. Clapton in the Medical Review for March 3rd.

The typical Halstead operation consists in a skin incision made high on the abdomen at an angle of 25 degrees to Poupart's ligament.

The incision varies in length from 6 to 12 c.m. This high incision avoids the region of the pubic hairs, insuring sterility, retraction downwards brings the incision directly over the inguinal canal. The aponeurosis of the external oblique is divided in the direction of its fibers and the internal oblique at right angle to its muscular bundles, taking care not to fray the edges. This gives a muscle-lined wound throughout, of prime importance in the closure. The coverings of the sac are opened, the sac divided at its neck and closed with fine silk continuous suture. In certain cases the large peripheral veins are separated and ligated. The vas deferens is lifted from its bed and the mesocord divided with a blunt instrument, while the cord is transferred to the outer side of the wound. Five buried silver sutures are used one above and two below the transplanted cord.

Suture No. 1, to the outer side of the transplanted cord, includes the aponeurosis of the external oblique and the belly of the internal oblique muscle, just at the point of division, and is placed after the manner known as the "Halsted mattress suture,"

Suture No. 2, below the cord and about 1 c.m. from suture No. 1, includes (1) the aponeurosis of the external oblique, (2) the divided internal oblique (upper medial portion), (3) the internal oblique (below the incision, in the lower outer flap), and (4) Poupart's ligament; and returning includes the same structures in reverse order.

Suture No. 3 and 4 includes the aponeurosis of the external oblique and the transplanted internal oblique, on the upper side of the wound and Poupart's ligament on the lower side; it only occasionally being possible to include the lower outer portion of the muscle in these sutures.

Suture No. 5 includes on the upper side the aponeurosis of the external oblique and the conjoined tendon and perhaps the sheath of the rectus on the lower side, Poupart's ligament and cremasteric muscle.

[Frequently it is most convenient to place suture No. 5 first and the others in the order named.]

The sutures should enter from above,

about 1 c.m. from the free margin, and by thus bringing the loop of wire on Poupart's ligament, the danger of the stitch tearing out is lessened. After all the sutures have been placed the wound's edges should be approximated and its snugness examined, particular attention being paid to the point of emergence of the cord, and to the inner angle of the symphysis. The wires are drawn tight, twisted about 6 times and cut off 5 m.m. long, and then with forceps are turned so that the sharp points do not project toward the skin. The vas (or cord) then is seen emerging at the upper angle of the wound, and for the rest of its course lies outside the abdominal wall, which has been closed behind it.

The skin is closed over the cord with a continuous subcutaneous silver suture. The wound is dressed with silver foil, and the patient is encased in a large gauze and plaster of Paris spika from the knee almost to the costal margin. This dressing remains on from 12 to 14 days, when the wound is inspected for the first time, and the skin stitch removed. The patient is kept in bed for 21 days, and advised not to do any heavy lifting for three months.

During the last ten years 109 cases have been operated on by this method (in which the veins were excised), and among that number there is not a single case of weakness or a recurrence at the site of the transplanted cord. After 58 of the early operations, in which the cord was handled with more or less severity, atrophy of the testicle was noticed in eight cases. In 51 subsequent cases, in which the veins were excised after the manner described, due respect being paid the delicacy of the cord, there has been no atrophy of the testicles. The object of excising the veins is to reduce the size of the cord as much as possible, and, except for the few cases in which the testicles atrophied, was a successful procedure. To obviate atrophy, the cord was transplanted *in toto* (vas and veins) to the divided muscle. Especially in those cases where the cord is torn from the inguinal canal and subjected to traumatism, or the testicles withdrawn from the scrotum, the veins should not be excised, because the probabilities of atrophy are too great. There are 109 cases that have been operated on by this method of transplanting veins and vas together, in which number there have been no cases of atrophy, but seven recurrences (6.4 per cent.) at the point of emergence of the cord.

If the testicle is atrophied on the hernial side or the patient is quite old the cord may be excised or castration performed. In

82 cases in which the cord was divided no cases of recurrence are noted.

The author concludes that after an experience of over nine years, we are able to say to a patient desiring an operation for non-strangulated hernia: The probabilities of death are less than one-half of 1 per cent. of pneumonia, if a general anesthetic is given, 1.2 per cent.; of phlebitis of the leg, 0.7 per cent.; of suppuration of the wound, 4 per cent., and since the introduction of gloves, of less than 1 per cent.; of recurrence of hernia, if femoral, none; if ventral, in which the recti muscles can be included in the suture, none; if an inguinal hernia, less than 4 per cent.

Now that we transplant the rectus muscle when the conjoined tendon is obliterated, knowing that its obliteration is the chief cause of recurrence at the lower angle of the wound, and now that we diminish the size of the cord by splitting the cord, transplanting the veins only, or excision of the veins, knowing the larger cord has been the sole cause of recurrence at the upper angle, he believes that the percentage of recurrence will be reduced much below 4 per cent. So far in cases which these modifications have been introduced, there have been no recurrences.

Extrauterine Pregnancy.

A very unique case, in which there was early tubal rupture, development of fetus to term free in the peritoneal cavity, celiotomy delivery of living child and recovery of the mother, is reported by Harry M. Lufkin in the American Journal of obstetrics for March.

The patient was 35 years of age mother of two children, previous labors normal, no miscarriages.

She was first seen January 3, 1899, suffering great pain in the lower abdomen, came on suddenly and was almost unbearable. Temperature and pulse normal. On examination a mass was found low down in the hollow of sacrum. Diagnosis of pregnancy in retroverted uterus with threatened miscarriage was made. Morphia was given to relieve pain and after a few days in bed was up and about again. Date of last menstruation October 29th 1898.

Several attacks of pain during March and April. At the fifth month fetal movements were felt. About the eighth month suffering was continuous, the motion of the child was extremely vigorous and entirely unrestricted, and though the thin abdominal wall any part of the fetus could be recognized by touch, an extremity was easily held between the fingers.

Celiotomy July 23rd, 1899, the fetus lay directly under the incision, the left hand and forearm alone being visible, the trunk and extremities completely swathed in intestines and entirely free from envelope of any kind.

The head was firmly impacted in the bony pelvis and was necessary to pry it free from its closely fitting quarters. The placental mass was found to spring from the upper border of the broad ligament was covered with peritoneum and plainly had its origin in the tube, its removal presented no difficulties. Uterus showed no signs of pregnancy and was only slightly enlarged.

The breasts showed no enlargement secretion of milk lacking. The baby cried feebly and lived four hours.

Dating from last menstruation the operation was done 272 days after conception.

He concludes that it was a case of free intraperitoneal pregnancy from not later than the third month.

The Electrostatic Wave Current.

Morton's wave current is discussed by William Benham Snow in the Medical Record for March 3rd after more than a year's experience with it and he considers it a more potent agent than any of the older electric currents.

In order to properly generate the current it is necessary to ground one pole of the machine to a gas or water pipe, the polarity being immaterial.

Only metal electrodes should be used with no material between the electrode and the patient's skin and the patient should always be on the insulated platform during treatment.

Connect the patient by one rheophore, or more if several joints or parts are being treated at one time, to the side of the machine not grounded.

Close or nearly close the prime conductors, and start the machine.

Gradually separate the prime conductors until there is commencing discomfort from muscular contraction, or a burning sensation which will disappear as soon as the skin becomes moist, or pain if applied over a neuritis. After short intervals the spark gap may be increased from time to time get the best results.

In treating a neuritis do not make the electrode too large, or the current will be too much diffused to produce the best result.

Allow no object that would draw off the current to come near the platform, and be careful that no one touches the patient, for obvious reasons.

This current is administered without the

least unpleasant sensation as soon as the skin once becomes moist beneath the metal electrode, unless it is given strong enough to cause muscular contractions. It may be administered in any of the cavities or canals of the body without discomfort if metal electrodes are used without insulation. The results as far as known are most excellent and fully succeeding the sinusoidal and faradic currents whenever this treatment has been adopted. New fields for the use of this current will suggest themselves as time goes on, and the greatest of electric currents for therapeutic use will find new friends who must concur in the above statements, which are not at all extravagant. Before condemning it, every detail of the technique must be understood and practised and those who ridicule the electrotherapist because the subject is too technical for their investigation will realize, after all, that he has at least one agent potent to relieve human suffering.

Paraldehyde with Chloroform.

The results of some experiments on animals with mixed anesthesia, paraldehyde and chloroform, are given by Cosimo Noto in the New Orleans Medical and Surgical Journal for March.

The action of paraldehyde upon the heart and blood vessels, the respiration and reflex sensation is harmless. And so by the association of paraldehyde with chloroform it is reasonable to expect suppression of the period of excitement, of vomiting and of starvation, the rapid production of anesthesia with a small quantity of chloroform and its prolongation with no harmful influence on the heart.

The result of the author's experiments on dogs went even beyond his expectation.

Though he has not tried it upon the human subject, he suggests that we administer paraldehyde before the inhalation of chloroform as the very best form of mixed anesthesia.

Even in those affected with cardiac disease chloroform may be given if associated with paraldehyde as the quantity of chloroform necessary is so small that all danger to the cardio-vascular system is avoided.

Care of the Mouth and Teeth in the Syphilitic.

The importance of this very practical matter is emphasized by C. Travis Drennen in the Memphis Medical Monthly for March.

Digestion and thorough elimination are dependant upon the mouth and its contents.

The likelihood of mucous patches, ulcerations and pyalism should cause us to take every precaution in regard to the patient's mouth. It is not enough to send him to a dentist but instruct him yourself to care for his mouth. A heavy toothbrush well used before and after each meal followed by a saturated solution of boric acid.

For hardening the gums he recommends alcohol.

Nicotine is a general and local poison in such conditions and should be discontinued until the mouth is cured.

He uses hydrogen dioxide freely and while taking mercury he instructs the patient to rub the gums well on both sides of the teeth, several times daily with the finger and thumb. He believes in the mechanical action of mercury as regards the production of pyalism and with proper attention no bad effect in the mouth will be noticed from even large doses of mercury.

Supravaginal Hysteromyomectomy.

Conservative operations on the uterus may be carried too far according to I. S. Stone in the Annals of Gynecology and Peditry for February. In the interstitial variety of fibroids he considers hysterectomy preferable to myomectomy where one or more sections are made into the cavity of the organ.

Each incision into the wall of the uterus or into its cavity adds additional danger from sepsis and in support of this he reports two cases which he thinks would have recovered from hysterectomy but died because too much so-called conservative surgery was practised. So he only recommends hysteromyomectomy for those tumors which have pedicles or do not require extensive mutilation of the uterus.

The extra-peritoneal method of treating the cavity made by removal of the growth is only mentioned to be condemned.

The Probable Cortical Centre of Sexual Instinct.

In the Virginia Medical Semi-Monthly for March 9, Richard T. Styll reports a case of paresthesia sexualis with anthropophagous practises, showing a lesion pointing to the angular gyrus as the center of the sexual instinct. The case came to autopsy and on the right hemisphere in the anterior part of the angular convolution, a small dark spot was found.

This when dissected out proved to be a small sac, about one-half of an inch in diameter, with distinct walls and containing fluid.

Muscular Rheumatism.

Pathologically, muscular rheumatism is a myositis interstitialis says I. Adler in the Medical Record for March 31.

Several cases are reported showing that rheumatic myositis located in the abdominal muscles may simulate cholecystitis, appendicitis and other affections of the abdominal viscera.

He concludes that the so-called muscular rheumatism is, according to probability and analogy, an infection with germs, most probably streptococci, possibly staphylococci, of attenuated virulence.

A certain degree of individual disposition toward this class of affection is recognizable. This disposition is augmented by indolent and sedentary habits, by improper nutrition, especially immoderate and rich eating, and alcoholic beverages. It appears, furthermore, that climatic influences may also, in a manner as yet unexplained, act favorably on the development of rheumatic affections.

Muscular rheumatism must be designated anatomically as an interstitial myositis, usually in conjunction with inflammatory processes in the adjacent tissues, the subcutaneous and fatty tissue, the fasciæ, and especially the nerves. In the latter the process is likewise that of interstitial neuritis.

As sequelæ of the inflammatory process, cellular infiltration, connective-tissue indurations, and sometimes even complete fibrosis of the muscles are produced. These changes in the muscular texture persist after the abatement of the acute inflammatory conditions and give rise to more or less frequent relapses and to manifold functional disturbances.

More medicinal treatment is indicated in the acute, more or less febrile stage. As soon as this stage is over, mechanical treatment, especially proper and adequate massage, becomes of paramount importance. It is the object of this method to bring about the absorption of the infiltrations and indurations and to restore the muscle to normal conditions.

Since the paper was written, Wassermann has succeeded in isolating a streptococcus from the blood and various viscera in the case of a girl who died from endocarditis, and chorea followed by polyarticular rheumatism. Injection of small doses of the pure culture of this streptococcus into the blood of rabbits invariably produces typical, usually fatal polyarthritis in the animal. The infectious nature of rheumatic polyarthritis, as caused by a specific streptococcus, can therefore be considered as certain. It will remain an object of inves-

tigation for the near future to determine if similar micro-organisms cannot be found for muscular rheumatism.

Acute Lobar Pneumonia.

Some observations on the recent pathology of acute lobar pneumonia as a basis for treatment are made by James K. Crook in Medicine for April.

This is now known as an infectious disease with probable identification of its pathogenic microbe and from this we have a rational basis of treatment which according to Andrew H. Smith is the introduction into the patient's system of substances which will render the blood an unfit culture medium for the diplococcus.

After a consideration of the various remedies as, calomel, quinine, salicylic acid, chloroform, creosote and carbolic acid he concludes that the discovery that pneumonia is an infectious disease and the recognition of its pathogenic microbe increase the hope that an abortive or specific form of medication will be brought to light.

Recent research strongly indicates that our chief reliance for an improvement in our present methods of treatment rests in the elaboration of a satisfactory form of antitoxin. The use of antiseptics for the destruction of pathogenic microbes in the tissues is very limited. Pathological chemists as well as clinical observers now recognize the hopelessness of attempting to discover any single body which will destroy all forms of bacteria in the system while leaving the host unimpaired. The discovery of specific remedies for several diseases, however, shows that certain agents act more powerfully upon the cause of disease than upon the tissues of the patient, and inspires the hope that the list of conditions thus yielding to specific medication may be extended. Coming to the consideration of pneumonia, however, it must be confessed that little actual progress has been made in this direction. It would appear that the field has not yet been sufficiently traversed by the pathologist and the chemist to light the way for the clinician. Several facts in connection with the natural history of the micro-organisms concerned in the disease still require elucidation, and we should have fuller information concerning the antiseptic solutions and the strength of the same required to exterminate the microbe before we can proceed intelligently or safely.

In the treatment of pneumonia we should ever bear in mind that it is a self-limited disease, and that its invariable tendency is to recovery, provided we can keep the patient alive a few days. While therefore the

author believes that in favorable cases we may cautiously test the new germicidal remedies, this should not, with our present knowledge, involve a wide departure from an intelligent expectant form of treatment, which taken as a whole has resulted in a far less mortality-rate than attempts to jugulate or abort the disease.

Varicocele.

The angiotribe is recommended in operating for varicocele by Leonard Freeman, in the Colorado Medical Journal for March.

The veins are separated from the vas in the usual manner and folded into a loop so as to shorten the cord to the desired extent; then the base of the loop is seized in the jaws of the angiotribe and the veins crushed. The projecting portion of the loop is then cut away and in a minute or two the instrument is removed.

The proximal and distal venous stumps are found flattened into a white, coherent, ribbonlike mass, with absolutely no danger of hemorrhage.

The stump is buried and the wound closed with collodion.

A well-fitting suspensory stuffed with cotton is immediately applied to prevent dragging.

If the posterior veins are also enlarged they may be obliterated by simply crushing them in one or more places, a procedure much less troublesome than ligation or excision.

Head Injuries.

Twenty-three cases of injury to the head are reported by Silas C. Blaisdell, in the Brooklyn Medical Journal for April.

He condemns the use of the chisel and states that the instrument to use is the rougeur, as it is fast and gives the minimum amount of shock.

He does not believe in economy in the removal of bone, but holds that all spicula must be removed carefully and completely, each crack or fissure must be enlarged, followed to its termination and scrupulously inspected.

This, of course, may necessitate a most formidable operation, as in one of his cases he practically took off the vault of the cranium.

He lays stress upon rapidity in these operations, the time being limited to the smallest amount consistent with thoroughness.

His time of operation was from 6 to 20 minutes including a number of extensive fractures.

Conservative Operative Treatment of Fibroids.

Three cases are reported by W. L. Burage, in the Boston Medical and Surgical Journal for April which were successfully treated by conservative methods.

The first case was the removal by abdominal myomectomy of eleven subperitoneal nodules together with the right ovary, weighing altogether one and one-half pounds.

The second case was a vaginal myomectomy in which a fibroid nodule of subperitoneal evolution was removed from the front wall of the uterus by anterior colpotomy.

The third case was one of morcellation of submucous nodule and polyp with pedicle springing from the fundus.

He uses the continuous stitch of catgut to control the oozing after enucleation of the tumor, and emphasizes the fact that all wounds in the uterus should be carefully closed.

His rule in regard to these tumors is, if they are small submucous, projecting into the uterine cavity, to dilate with laminaria or tupelo under strict antisepsis and remove by twisting, snaring or morcellation.

If the tumor is subperitoneal or subvaginal and in the cervical region, the vagina being roomy, he does an anterior or posterior colpotomy and endeavors to enucleate without opening the peritoneum.

If the tumor be subperitoneal in the region of the fundus and in all other cases, he opens the abdomen.

He thinks electricity has no lasting effect upon the tumor, though it may be of use in relieving pain and hemorrhage.

Myomectomy he considers a more difficult operation, requiring more skill, than hysterectomy.

Intestinal Catarrh and Infant Feeding.

The treatment of intestinal catarrh is first purgative, says Chas. Williams in the Medical Times for April, and among the purgatives there is nothing better than castor oil. The next in value is calomel, two grains every hour until six are taken. These may produce a temporary increase in the diarrhea, but it may be controlled by bismuth, acetate of lead, nitrate of silver, sulphate of copper or others. If there is much pain opium is given in the form of morphine. Irrigation is often efficacious and it is better to use a solution of chloride of sodium, or borax or silver nitrate than to use the plain water. On recovery of the patient excess in diet must be avoided and flannel

bandage should be worn over the abdomen, especially if in a damp climate.

In regard to infant feeding, he considers mother's milk first, next to this comes cow's milk. Milk sterilized by heat is not an ideal food and he thinks infantile scurvy may be caused by its use.

When a child is attacked with gastrointestinal catarrh we may suspend milk feeding and give mutton broth or wine whey or raw, scraped beef. The intestinal antiseptics are the medicines recommended, irrigation of the bowels with pure water and the avoidance of opium.

For chronic intestinal catarrh he advises careful regulation of the diet, saline laxatives and intestinal antiseptics.

Pollution of Streams.

In speaking of the pollution of streams in Pennsylvania, Harvey B. Bashmore, in the Sanitarian for April calls attention to the fact that the so-called purity of mountain streams may be only a fable.

Not long since a city of 30,000 inhabitants, getting their water from a mountain stream, began to suffer from typhoid fever and the State Inspector found any quantity of fifth only five miles back of the city where a branch stream acted as an open sewer for a flourishing town of 1,200 people. It was found that this small town had 19 cases of typhoid fever within a month. So eternal vigilance is the price of pure water even from a mountain stream.

He states that Harrisburg has the intake of its pumping station below the mouth of several of its own sewers, so that the people are actually drinking their own waste. An almost incredible position for the capital city of a great State to be in.

Inguinal Hernia.

A number of cases are reported by Thos. P. Scully in Medicine for April showing the comparative results of radical treatment by operation, and treatment by injection in inguinal hernia.

He uses the following injection :

Fluid extract quercus alba	1½ ounces.
Solid extract quercus alba	1½ drams.
Carbolic acid crystals	2 drams.
Iodine resublimed	2 drams.
Morphine Sulphate	10 grains.

Mix the carbolic acid and iodine thoroughly in a mortar, add the other ingredients, and triturate thoroughly. Twenty minims of the above is the maximum quantity for one injection.

During the last eight years he has treated

by injection 148 cases; 104 adults; children 16; double hernias 28.

None of the double hernias were cured but all were more or less benefited, that is the canal was reduced in caliber.

Of the 120 cases of single hernia, 58 were successful one year from date of last injection, of the 62 cases not cured all were benefited.

He concludes that in regard to recent inguinal hernia that can be retained easily with a truss, we can say to those seeking relief that they can probably be cured by injection. To those who have a hernia of long standing and retained with difficulty we cannot promise a cure. We can relieve them in many cases, but the greater number will be failures. On the other hand, we can say to them that no matter of how long standing the hernia may be, we can to-day cure over 95 per cent of them by an operation; and he always encourages an operation in any case, notwithstanding the fact that he has cured many cases by injection and will probably continue treating suitable cases in that way, not from choice, but because of the fact that many people will not submit to an operation.

Lethargy and Trance.

The recent discussion of premature burial in connection with a new instrument to prevent it prompts T. M. Madden to write an article on the subject in the Inter-State Medical Journal for March.

He admits the possibility of premature burial in certain cases and the fallaciousness of all tests.

He relates several cases of profound lethargy simulating death.

The condition of the mind during lethargy is the same as during sleep, the only tangible difference being one of degree or duration.

He inclines to the opinion that the function of the cerebral hemispheres is never completely interrupted, even in the most profound trance.

Death-trance may occur as a primary affection suddenly, though most likely to occur in diseases of the nervous system.

Auscultation should detect some cardiac action however feeble; or the thermometer should reveal some vital heat; or the older test, that of the mirror to the mouth.

In some cases, however, even these tests are practically unrecognizable.

This condition is extremely rare, but the horrors of being buried alive are so great that we should spare no precaution when there is the least suspicion.

Puerperal Pyemia.

A rather interesting case of puerperal pyemia is reported by I. W. Bard, in the *Cleveland Journal of Medicine* for March.

The patient was 42 years of age. During her tenth pregnancy her limbs were very much swollen and the veins in a varicose condition, but after delivery the swelling subsided, though the veins remained hard and knotty. One week after delivery she had a severe chill with following high temperature and a week after the first abscess was opened at the inner side of the right ankle. At intervals abscesses were opened in various parts of the limb and abdominal wall, and twelve weeks after the confinement the patient died. Some of the peculiarities of the case were the fact that the appetite and digestion remained good throughout the entire sickness.

Almost total absence of either constipation or diarrhea.

No swelling or tenderness of abdomen at any time, nor any indication of any affection of the liver except the bronzing of the skin during the second and third week.

With the exception of the abscess on the left hip, all collection of pus were on the right lower extremity.

With the exception of pain in the left thumb during the fourth week, there was no pain at any time in the left upper extremity; nor were there at any time any joint pains in the right lower extremity, the joint pains being limited to the right arm and left leg.

Death was supposed to be due to thrombus. Necropsy was refused.

The Etiology of Acute Tonsillitis.

The acute anginas are classified in seven groups by William J. Class, in the *Inter-State Medical Journal* for March.

The largest and most important group are those caused by the pneumococcus; second, those caused by the diphtheria bacillus; third, those caused by the streptococcus pyogenes; fourth, by the diplococcus scarlatinæ; fifth, by the influenza bacillus; sixth, by the staphylococcus pyogenes; seventh, by mixed infection, two or more of the above germs being present in a given case.

He admits the possibility of other germs causing sore throat, as in measles, variola and endocarditis.

He concludes that if more attention was paid to the bacteriology of throat affections it would lead to a better understanding of the modes by which infection enters the body.

Hygienic and Prophylactic Measures in Children.

Louis Fisher, in the *Dietetic and Hygienic Gazette* for April, discusses this subject in connection with some therapeutic suggestions.

The nose and throat are very important as many of the microorganisms of disease enter by this route. Any child who has enlarged tonsil pharyngeal disease, or adenoid vegetations is, of course, more liable to infection than one who has a healthy throat and nose.

Air and sunshine are very important. The so-called morning headache is due to breathing an excess of carbonic acid gas in a close room during the night and many an unnecessary dose of bromide or seidlitz powder is swallowed simply because nature craves oxygen.

Isolation is also important in every case of sore throat, membrane or no membrane. Snoring at night is usually due to adenoids.

Eneuresis nocturna may be due to the same cause or to irritation of the bladder, elongated prepuce or helminthiasis.

Rectal Stricture and its Electrical Treatment.

The two most frequent causes of stricture of the rectum are cancer and syphilis, says H. P. Cole, in the *Journal of Electro-Therapeutics* for March, and are really outside the consideration of the electro-therapist, consequently the prophylaxis is not mentioned.

In the electrical treatment of this condition two points are to be kept especially in mind. They are the plastic deposit to be removed and the inflammation to be subdued, and the method of treating these two conditions are radically different. To be on the safe side it is best to treat the inflammation first by the faradic or a very mild positive galvanic application and when all inflammation has disappeared then use the negative galvanic for the deposit and it will more quickly do its work.

Encysted Hydrocele of the Testis.

A large bilateral encysted hydrocele of the testis is reported by Ralph Williams in the *Southern California Practitioner* for March.

This rare condition was found in a patient 19 years old and was of seven years duration. The open, radical operation was performed and the fluid found under the testicular layer and between that and the tunica albuginea, the sac of the tunica vaginalis being empty.

Fracture of the Femur.

W. C. Gates, in the Railway Surgeon for March 20th, endorses the conclusions of the American Surgical Association in regard to the result of treatment in fracture of the femur.

The Association concludes that a satisfactory result has been attained when firm bony union exists.

When the long axis of the lower fragment is either directly continuous with that of the upper fragment or the axis are on nearly parallel lines, thus preventing angular deformity.

When the anterior surface of the lower fragment maintains nearly its normal relation to the plane of the upper fragment, thus preventing undue deviation of the foot from its normal position.

When the length of the limb is either exactly equal to that of its fellow, or the degree of shortening falls within the limits found to exist in 90 per cent. of healthy limbs, namely, from one eighth of an inch to one inch.

When lameness, if present, is not due to more than one inch of shortening.

When the conditions attending the treatment prevent other results than those obtained.

In regard to methods he favors extension and suspension and does not think much of a fixed dressing as he wants the point of injury open to inspection so that any complications or unfavorable symptoms may be readily recognized and promptly treated.

Fracture of the Cervical Vertebrae.

S. A. Spilman, in the Railway Surgeon for April 3rd, reports the case of a man who lived five days with a broken neck.

A laborer fell from a bridge a distance of forty feet striking on his head.

Complained of great pain in back of neck, tingling sensation in arms, embarrassed respiration, vomiting, priapism, paralysis, delirium, high temperature and death on the fifth day.

Autopsy showed a quantity of black fluid blood underneath the deep fascia of the neck, the sheath of the cord slit at the level of the 5th cervical, otherwise the cord seemed normal.

The atlas was broken, the second, third and fourth uninjured, the 5th, 6th and 7th severely crushed and broken.

No operation was thought advisable on account of the embarrassed condition of the respiration. He concludes that in crushing injuries of this part it is better to refrain from surgical intervention.

Placenta Previa.

When called to a case in which uterine hemorrhage exists at any time from the second month to the last trimester in gestation, especially if there are gushes of blood without pain and no history of traumatism, we may suspect placenta previa, according to Hugh Hendrixson in the Columbus Medical Journal for March.

If the diagnosis is clear and it is a case of complete marginal or succenturiate, and the hemorrhage profuse, the treatment is to terminate gestation as soon as possible.

He advises, when the hemorrhage is not very profuse and before the seventh month, where incessant vigilance can be relied on, noninterference until viability is quite certain or urgent causes demand immediate interference.

We may introduce a tampon allowing it to remain 10 to 24 hours, or until labor pains are very pronounced, when the dilation is completed by the fingers and the fingers pushed through the mass and a leg brought down which will control the hemorrhage.

Causation of Diseases of Women.

A few important factors in the causation of diseases of women are discussed by Ralph Waldo in the International Journal of Surgery for April.

The recklessness with which they enter the marriage state and in a few instances the bridal gift is an acute infection with gonorrhea, syphilis, or chancroids. Another and much larger class of affections are of sub-acute and chronic gonorrheal infection, involving Skene's glands, the glands of Bartholin, the urethra, the cervical and corporeal endometrium, or the infection may even extend to the tubes, ovaries or general peritoneum.

Another cause of disease is the wish of some newly married couples not to have children at least for a time. He well says that a woman should give birth to her first child before she is thirty years of age and preferably before she is twenty-five. And he insists that these facts cannot be too strongly impressed upon the minds of newly married people. In his experience a large number of the cases of pyosalpinx were due to septic endometritis following abortion that had been self-induced.

When an abortion takes place spontaneously from disease of the uterus or of the embryo it is apt to be expelled in a mass but when it is due to mechanical interference more or less of the secundines are left behind.

Later in life a women who during the

early part of her married life has prevented conception or produced abortion will frequently conclude that she wishes to have children. These are the most difficult cases we have to treat, for not infrequently the sexual organs are diseased beyond repair and the patient is a hopeless neurotic.

Headache.

Three classes are recognized by Geo. C. Smith, in the *Providence Medical Journal* for April, functional, toxic and organic.

Some headaches may belong in two classes as functional and toxic from indigestion.

When a patient presents himself with headache for the first time we should make a very thorough examination and endeavor to bring the case into one or other of the classes. As a rule this may be often done from the history of the case.

Headaches due to indigestion and auto-intoxication are most frequent. Neurasthenic headache is usually not severe, is occipital, and whether accompanied by anemia or not, has often a sense of constriction.

He records a case with diarrhea due to mitral insufficiency and relieved by digitalis.

We have congestive or hyperemic headaches which may be due to intestinal disturbance or acute cerebral hyperemia.

Cerebral abscess or tumor may also be an underlying cause.

Syphilis, Bright's disease, eye disease and numerous other causes may produce this condition, but it can be classed in one of the divisions mentioned above.

Formaldehyde as a Preservative for Milk.

According to J. Moeschel, in the *Kansas City Medical Record* for March, this is a safe and effective preservative for milk.

After a number of experiments he concludes that it is harmless to children in the small amount necessary to preserve the milk. He states that the proper proportion is one to two tablespoonfuls of a 1½ per cent. solution to 40 quarts of milk, which is about 1 in 150,000 in the former, and 1 in 75,000 in the latter case. One pint of milk, therefore, will contain either .09 or .045 of 1 per cent. of formaldehyde. The weaker dilution kept milk sweet for two days; the stronger dilution for five days during June.

Sterilizing by heat is objectionable, he thinks, for the following reasons:

The amylolytic ferment is destroyed.

The caseine coagulates less rapidly by rennet.

The caseine is less rapidly digested by the gastric and pancreatic juices.

The butter fat is rendered less absorbable. Heating even for but a short time at 212 deg. F. changes milk sugar into caramel.

The use of formaldehyde has the following advantages:

It does not interfere with the human gastric, intestinal or ptyalin digestion.

Infants that did not prosper with various kinds of infants' foods and milks, also cow's milk prepared according to the best authorities, at once changed for the better when supplied with milk treated with formaldehyde—and they continued to augment in weight and health.

An insignificant amount, 1 to 150,000, and not more than 1 in 50,000, preserves the milk from souring for a few days. Whether the small percentage destroys the bacteria or inhibits their growth will be shown by further investigations, now under way.

Formaldehyde is the best milk preservative and does not introduce any mineral matter.

Sciatica.

Elliott B. Palmer, in the *Cincinnati Lancet-Clinic* for April 7th, calls attention to the fact that pelvic tumors are a possible cause of sciatica and recommends that in this disease we should examine carefully the pelvic organs. Solid tumors especially can be counted on to cause pressure symptoms whenever they are confined to the pelvis.

This pressure may be exerted on the hollow viscera, the blood-vessels or the nerves.

Retroversion of the uterus with enlargement from pregnancy or disease might cause pressure on the sciatic nerve roots.

Rarer causes of nerve pressure which may be mentioned are: distended rectum; bony and cartilaginous tumors; osteomalacia; aneurism and even bladder stones.

He reports a case in which removal of large fibroid completely cured a severe sciatica of some duration.

What Most Contributes to the Success of the Young Physician.

This question is the title of a symposium in the *Richmond Journal of Practice* for March.

I. S. Stone, Robert I. Hicks, S. S. McMurry, R. G. Martin, W. R. Gatewood, J. W. Long, C. W. Rodgers, J. G. Rennie and L. G. Pedigo are the contributors.

Among the essentials mentioned are strict attention to business, individualism, energy, attention, pleasing manners, tact, thorough knowledge, honesty, studiousness, etc.

Cancer of the Breast.

Progress towards the cure of mammary cancer has come from the recognition of the anatomical distribution of the lymphatics, says Robert Abbe, in the Medical News for April 7th, and to-day the axilla is regarded as primarily contaminated, almost as soon as any tumor can be recognized in the breast.

Invisible remnants of the disease may be detected by immersion of the extirpated parts in 5 per cent. nitric acid followed by alcohol.

All disease tissue, however, should be given a wide berth.

In a total of 123 cases he reports 25 per cent. as having reached the three year limit.

From thorough operations the pressure of the cancerous masses in the axilla and neck, producing inevitable edema of the arm and extreme neuralgia, is not seen. The cachexia, formerly so distressing a feature of persistent abortion, is now rarely seen even when recurrence ensues. This is equally true in operations for cancer of the stomach, bowels or rectum; the products of cancer growth cease to poison the system and the patient usually acquires and maintains a good color.

Recent experience shows that a recurrence of cancer after operation need not discourage the patient or surgeon. If it be speedily and thoroughly attended to, there is still a strong probability of its eradication, as the recurrence is not a return of the disease, but a continued growth of invisible metastatic foci left at the time of operation.

Carbolic Acid Poisoning from Absorption.

A fatal case of carbolic acid poisoning in an infant, due to absorption by the skin is reported by R. Abrahams in Pediatrics for March 15th.

When the child was seven days old, while being dressed by the nurse, it was suddenly seized with violent general convulsions followed by great dyspnea, shallow and labored respiration, pulse too weak and frequent to count, contracted pupils, absent reflexes, cold sweat, rectal temperature 105. Bowels and kidneys acted freely, the urine being golden yellow, but turning dark on standing. Two grayish white eschars were found in the right inguinal region. Death occurred ten hours after the first convulsion from profound coma and heart failure.

The following history is given: The nurse prepared a carbolic acid douche for the puerperal woman; accidentally she touched the pure carbolic acid with her thumb and index finger; the same moment

she touched the baby's right groin with the carbolized digits, whereupon, five minutes later, the infant fell into convulsions.

The rapidity of absorption, the avenue of absorption, the apparently small amount of the poison, the long continuance of the symptoms—namely, ten hours—before the end came are points of interest and make the case worthy of record.

Antitoxin in Private Practice.

The value of antitoxin in diphtheria is shown by the report of Frank W. Wright in Pediatrics for March 15th.

In the past five years he has treated 268 cases. Of those to whom antitoxin was given upon the first day 12 died and 99 recovered, an approximate mortality of 10 per cent.; of those given the remedy on the second day, 9 died and 58 recovered, 15 per cent. mortality; of those after the second day, 37 died and 51 recovered.

He concludes that antitoxin usually cures favorable cases and often unfavorable ones, it prolongs life, lessens the severity of the disease, tends to prevent stenosis and the need for intubation in laryngeal cases, and when intubation is necessary it lessens the mortality; it prevents complications and sequelæ, and materially shortens the course of the disease.

Gall Stones.

In speaking of some pathological and clinical phases of gall stones, A. H. Cordier, in the Annals of Gynecology and Pediatrics for March, says that cholelithiasis is of frequent occurrence, giving rise to manifest symptoms, either severe or obscure.

Cholesterine as a gall stone producing agent, must be present in an abnormal quantity.

Cholesterine is in a great measure a product resulting from the destruction and disintegration of the epithelium of biliary ducts and gall bladder.

Bilirubine Calcium, an insoluble compound, the outgrowth of the union of bilirubine and the lime salts, forms the nucleus of most all the stones formed in the ducts and the majority of those formed in gall bladders.

Jaundice, ptomain poisoning and suppuration are late symptoms of cholelithiasis.

Dyspeptic symptoms, swarthy skin, uneasiness in region of gall bladder (congestion of liver) and loss of weight are some of the remote and local outgrowths of the presence of gall stones.

Inflammatory diseases of the duodenum and bile passages are the most direct causative factors in the production of gall stones.

Some cases get well without any assistance from the physician or surgeon, yet the progress of the cases that terminate favorably without surgery, can be greatly assisted by the physician.

The surgery is especially difficult and the inexperienced should not undertake to do it.

A ball valve stone usually continues giving rise to symptoms until removed by surgery.

Stones in gall bladder producing septic symptoms should be removed.

Incomplete Abortion.

In the management of incomplete abortion, J. H. Belt, in the *Cleveland Journal of Medicine* for March, advises the use of the finger in preference to the curette. In some cases it may be hard to reach the fundus with a short finger when the uterus is very long, but claims that with strong pressure from above it is always possible.

He cleans out the uterus with the finger without an anesthetic.

For the passive flow or oozing that some times takes place after all extraneous matter has been removed he recommends the fluid extract of *Hydrastis Canadensis* in 30 minim doses in capsuls every three hours which may be relied upon to control it.

Traumatic Hemorrhage into the Spinal Cord.

In these cases blood may be poured out within the spinal canal, extra or intradural, or the hemorrhage may be within the substance of the cord itself, *hematomyelia*, according to Pearce Baily, in the *Medical Record* for April 7th.

While these conditions are very interesting to study, very little can be done in the way of treatment.

He states that the only treatment in hemorrhage within the cord is medical.

Rest in bed, attention to bowels and bladder, iodide of potash, faradism, galvanism and after the immediate effects of the injury have passed, massage and passive motion in the neck are useful.

Prophylactic Appendectomy.

During 1899 there were 299 deaths from appendicitis in the Borough of Manhattan, according to Thomas H. Manley, 175 not operated on and 124 died after operation.

After a consideration of the dangers and indications he concludes that there is no condition of any kind whatever which ever warrants any description of mutilation of the body in a well formed, vigorous child.

Drs. Geo. R. Fowler, Winslow Anderson and Thad. A. Reamy speak out very emphatically against a "normal prophylactic appendectomy."

Creosote.

Some clinical observations on the use of this agent in fermentative intestinal disorders and respiratory affections are given by F. C. Test, in the *New York Medical Journal* for April 7th.

His report shows that creosote has a very decided value in the treatment of intestinal disorders with fermentation, both in the acute and chronic form, and in children as well as adults.

In pertussis and bronchitis as well as in tuberculosis it was found to have a beneficial action.

To avoid irritating the stomach he advises small doses frequently repeated.

Puerperal Septicemia.

The serum treatment of this condition is advocated by Lewis H. Hering, in the *New York Medical Journal* for April 7th.

He says that failure may be attributed to the use of old serum, delay in inaugurating the treatment or insufficient dose, and overstimulation of the patient.

He considers the disease one of mixed infection and a strictly antistreptococcic serum may fail.

In addition, he uses the curette, drainage, irrigation, no morphia, quinine with ergot, proper stimulation and nourishment.

The Leading Editorials of the Month.

Some Elements of Success.

We can all give advice and one reason why so few of us take it is, perhaps, because it is not worth the taking. The *American Medical Monthly* gives the following which is worth taking:

A year or so ago somebody offered a prize for the best essay on the training of husbands, and it was won by a young girl of eighteen! It is barely possible, in view of the above, that we may be able to give some points to those starting on their medical career, even if we ourselves have not made a brilliant success or placed our names high in the galaxy of medical greatness.

The first suggestion is the necessity of laying a good foundation on which to build the medical structure. It is a fine thing to have a college education, and before many years, so general will be the custom of attending college, that it will be expected of

every physician to graduate at some literary institution. There is a decided gain in having so broad an education. It gives a cast to the character and a training to the mind, not to be had otherwise.

It has been said that one year of culture is better than eighty years of a narrow, ignorant life, and the College man is to be the man of the future. One prominent college requires the A. B. degree as preliminary to the study of medicine, and others will soon follow this initiative. Even if one should expect to practice in the country, perhaps all the more in that event, should a young man or young woman strive to take a college course.

Not to every individual, however, is such a course possible, but, by taking advantage of the opportunities for home study now open to all, much of the *real* value of college work may be gained.

No thoughtful person will object to the lengthened period of preparation for medical study or the four years of lectures and laboratory work. As some one has remarked, it takes a hundred years to make an oak, but only a few months to make a squash. Don't be a squash!

Then, after the medical course has been completed and the newly-fledged doctor is ready to begin practice, in what way can he best succeed? Not by means of show and bragging, not by setting up a carriage until one really needs it in his work, not by advertising nor quackery, not by taking up some outside work. The method of gaining a successful career in medicine can be described in one phrase, *cure the sick*.

If cases of illness are so managed by the physician in charge that health is restored, the gratitude of the patients leads them to speak well of their healer and so reputation grows and patients appear and ducats become plentiful. To secure success, however, demands self-sacrifice on the part of the young physician. It means devoted, conscientious work among the poor as well as the rich; it demands persistent and intelligent study, the relinquishment of many social pleasures, the holding of ourselves as the ever-prompt servants of the sick.

More than this, the truest success will never be attained unless the physician loves his work and loves his fellow men, sympathizes with them in their suffering, and endeavors to relieve their distress because of this sympathy, rather than because of the financial recompense.

It is an important element in medical success that the private life of the physician be consistent and moral. The religious element should be cultivated and church relations maintained. Amidst the trials and

temptations of the physician's life such afflictions are not only pleasant, but helpful and necessary.

So we come to the conclusion that the best way to the best success is just to do one's work well *and keep at it*.

The Claims of "Christian Science."

The Christian Scientists are on the Southern route. The Maryland Medical Journal says that on Tuesday, February 20, a delegation of about one hundred and fifty Christian Scientists appeared before the committee on hygiene of the Maryland house of delegates to urge an amendment to the practice act, exempting them from the legal responsibilities of medical practitioners. They were represented by three attorneys, who made the most of their cause. Opposed to them were half a dozen medical men. Mr. Hammond, a "First Reader" (not a primer) of a Christian Science church in Baltimore, was asked: "In a community of five hundred or a thousand persons, all of whom were Christian Scientists, what precautions would you take against infectious disease?" The reply, delivered in what we suppose was "First Reader" style, was: "In a community of a thousand, aye, in a community of five hundred souls, all Christian Scientists, disease of any sort would be impossible."

Mrs. Linscott, of Washington, is certainly no such rudimentary thing as a "First Reader." She is an extremely advanced text-book, and was able to fairly inundate the minds of her hearers with her eloquence. Being asked whether she employed the microscope in the diagnosis of diphtheria, she replied: "Yes, but not a material microscope. The microscope which we employ is the microscope of spiritual discernment." For a time it seemed doubtful if the modest gentleman who propounded the question would recover his speech.

The "Church By-Laws" on medical education were read to the committee, showing that the whole art of obstetrics may be imparted in four lessons, in as many days, and that the course in "mental practice and malpractice" occupied twelve lessons. It would be interesting to know how much of this curriculum treats of practice and how much of malpractice.

An instance was quoted, from the official organ of the cult, of a little girl who overcame the difficulties of fractions by repeating a religionistic formula; another story of a woman who subdued a conflagration in her house by "realizing" the ninety-first psalm. Still another case was that of a

woman having a carious tooth and a riotous ache, who in twelve hours obtained a sound and perfect set of teeth.

Most remarkable of all was the healing of a dumb child in Ohio by a Christian Scientist in Kansas, neither the healer nor the healed being aware that any treatment had been either sought or given. The Scientist, however, immediately her attention was called to the miracle, realized that virtue had gone out of her. The Scientist applauded vigorously each of these "demonstrations," and asserted that the misguided physician who cited these "cures" was an effective advocate of their cause.

No inventory of teeth was made at the hearing, but among the delegation one noticed at least one case of phthisis, one choreic, and one man with a misfit glass eye.

Medical Matters in the Lay Press.

The International Journal of Surgery says that when the "Daily Howler" or the "Morning Cormorant" reports medical matters, some of us are inclined to laugh, while others, whose bump of facetiousness is not so well developed, feel as if their milk of human kindness had been exposed to a thunderstorm and had turned sour. As long as these praiseworthy sheets have none but descriptions of how Dr. Jake, of Calftown Four Corners, peeled the butcher's eye like an onion and put it back in place, just as good as new, we don't mind, for we know that if we investigate the matter we will find that there is not a word of truth about it. The things we really object to are the reports, more or less garbled, that are occasionally published of the actual doings of some of our surgeons. We are apt, quite naturally, to think that these men are at fault, and seek, in an undignified way, personal notoriety and advertisement. Yet this view is often wrong, and we firmly disbelieve the existence of any such tendency among men of the slightest real merit. As a matter of fact, it is quite natural that the more prominent practitioners should most frequently be called to attend people of some importance, any information in regard to whom the ubiquitous reporter pounces upon like a jackal upon his prey. Hence the appearance of the names of Drs. A. B. and C. at fairly frequent intervals in the papers. We sincerely believe that the doctors themselves are very seldom at fault, and that they would avoid such mention if they could, and we have personal knowledge to the effect that many of them have suffered much annoyance and distress owing to this state of things.

An Important Factor in Producing Good Results from the Cold Bath.

A cold bath is generally supposed to be a very simple thing to give a patient and that it may be administered by anyone. But we are beginning to see that more is involved than a mere feeling or reduction of temperature.

The Therapeutic Gazette says that the profession is gradually coming to understand that the value of cold applications in fevers, while it is to a certain extent dependent upon reduction of temperature, is much more dependent upon the reaction which the application of cold to the surface of the body produces. This reaction equalizes the circulation of the blood in the various portions of the body, stimulates the nervous system, which may be benumbed by the toxic materials circulating in the blood, and probably increases the activity of the liver and kidneys so that the toxic materials are destroyed or eliminated.

While it is true that the modified application of cold may produce good results in certain instances, we are convinced that any attempt to gradually decrease the temperature of the water, or to expose the patient to its influence without friction, prevents the patient from receiving much of the good which can be obtained by hydrotherapeutic measures. We are constantly seeing physicians who are timid about employing cold to the surface of the body, and who recommend that tepid applications should be made, or that the patient shall be placed in a tepid bath which shall be gradually cooled by the addition of ice. As a matter of fact this process is much more disagreeable to the patient, in our experience, than is the more rapid way; and it certainly fails to produce therapeutic results which can in any way be compared to those caused by cold sponging or plunging.

Very recently our attention has again been called to this matter by an original article published in one of our contemporaries, in which it is suggested that the patient's body should be wrapped in one thickness of ordinary cheese-cloth, and then that this cheese-cloth shall be kept continually moist, so that by the process of evaporation the surface of the patient will become cooled. While no doubt such a method of treatment does reduce fever, it must very materially increase internal congestion, and it certainly cannot produce reaction. Neither will the blood come to the surface from the internal organs under such a method of treatment, but rather will remain in those organs which are overheated.

It does not seem to be generally recog-

nized that physiologists and hydrotherapeutists have proved beyond all doubt that under the application of cold to the surface of the body the heat of the internal organs actually rises, but that this undesirable condition is remedied by the profuse flow of blood to the surface of the body after reaction takes place, whereby internal heat is materially decreased by extraordinary radiation. A patient wrapped in cheese-cloth which is cooled by evaporation has simply a cool surface and a hot interior. While the bodily temperature may fall, we believe that the condition which is produced in the internal organs is distinctly disadvantageous.

Pagan Practices Paralleled in Christian Lands.

Christian scientists are more than harmless fanatics and should be muzzled in some vigorous way.

The Cleveland Medical Gazette preaches a good sermon on the recent history of the Martsolf family in New Brighton, Pa.

On the evening of Jan. 3rd, Mr Frank S. Martsolf, a well known citizen of that town, a carpenter by trade and in good circumstances, entered an undertaker's establishment to arrange for the burial of a dead child. The undertaker asked for the physician's certificate, when Mr. Martsolf replied that he had none, as no physician had been called, and that the child Nancy Irene, aged 6 years, 2 months and seven days, had died of diphtheria. The coroner, J. H. White, being informed of the circumstances, made an investigation. He found that the child had been sick five days of malignant diphtheria, but the parents believing in Divine healing, had not called a physician, the Health authorities had not been notified, the house had not been quarantined, but persons had been permitted to come in and go out without precaution, many having no suspicion of the nature of the malady.

The coroner made out a certificate on which he wrote: "The parents of this child through their belief in Divine healing neglected to call a physician to attend the child while it suffered, and it died from malignant diphtheria."

A permit was issued and the child was buried.

The following week it was rumored that another child, Roy L., a boy of five years, was sick with the same disease and the rumor proved to be true. J. D. Martsolf and District Attorney H. R. Calhoun had a talk with the parents, but they refused to consent to have the child attended by a physician. They said they are Free Presby-

terians and a part of their belief is the curing of diseases by faith. They acknowledged that the disease was diphtheria, but they would not have a doctor. They said if it was the Lord's will to take the boy as He had the girl, He might do so; neither would they stop anyone from entering or leaving the house. That night Dr. J. S. Boyd, who had been the family physician before the Martsolfs got the faith cure craze, visited them and tried for two hours to reason or persuade them out of their delusion, but to no avail. However, the doctor examined the boy and made sure he had diphtheria. The secretary of the Health Committee and Officer Winters also tried their powers, but in vain. A police officer was placed on guard in front of the residence. Soon the Rev Mr. Rader, a Free Presbyterian minister, and with him an elder of the same persuasion, arrived from New Sewickley township, and sought to enter the house. They insisted so strongly that the officer was obliged to take them into custody and bring them before the Burgess. At the Burgess' office the pastor declared that he had come in obedience to the Lord's command to anoint the sick child, and also that it was necessary that he have an elder of the church with him. The Burgess asked him if he was not afraid to expose his own children by visiting such a case. He said that if they were afflicted with the disease the Lord would care for them. He was asked why the faith treatment had not availed anything in the case of Nancy Irne. The Rev. Rader said that he had not anointed the child, the disease had acted so quickly and he had not been summoned till the child was dead.

Why had not a physician been summoned? He said the Bible does not teach that a physician be summoned. The Burgess inquired whether the Bible teaches that people should assist in spreading disease broadcast. The pastor acknowledged that it does not, and he and the elder promised to change their clothes after they had visited the patient. As they had committed no offense, they were released. They spent a half-hour in the Martsolf house and then left town.

The second child, Roy L., died on Jan. 5. The baby, Lloyd K., and the father, Mr. Martsolf, were found to be suffering with the disease and the former family physician again offered his aid. To this the Martsolfs finally consented. The doctor found the baby's case far gone with grave kidney and heart symptoms, to which it succumbed. The father recovered. The fact that no physician had been called to attend the children, and that the nature of the disease had not been made known, rais-

ed a great storm of indignation in the neighborhood, and indeed nearly over the whole town. Borough Attorney Calhoun was requested to give an opinion as to what legal course should be pursued; and it is pretty sure that something would have been done, though perhaps not strictly in accordance with either law or Gospel to bring those parents to a sense of duty, if the children had not all died so soon and thus ended the sickness.

It is strange indeed if there is no law in the land to prevent such crimes as that of the Martsof parents. It should be no difficult task to prove it a case of criminal neglect. It could be plainly shown that medical attendance in time of injury or illness is as much a necessity of life as food, clothing or shelter. If the police authorities could not see their duty in the matter, it might have been taken up by a Humane Society and tried before the proper court. The Health Department should certainly have power to enforce quarantine and compliance with other measures for preventing the spreading of a contagious disease; and, if the Board of Health or Committee of Health as it exists in New Brighton had carried preventive measures so far as to compel isolation of the sick or even enforced medical attendance, it is probable that public opinion would have sustained them.

Of course, there would have arisen a howl about individual liberty, especially about religious liberty—and here we come upon the main difficulty of the whole question. Neglect of the sick as practiced by the devotees of the faith cure, is only another form of the many crimes committed in the name of religion. The U. S. Senate has recently engaged in a struggle upon a question which has interested the whole country, regarding a crime no more shocking than this one of neglecting the sick, all under the name of a religious belief. It is astounding that such a practice as "faith healing" should be tolerated in this country for one hour. The fact that it is, is not at all flattering to our reasoning powers nor to our zeal as republican citizens. It is amazing to see the haze that gathers about a subject immediately there is a religious factor in it. And the peculiarity of the foggiess apparently surrounding the subject of the faith cure is that it steals a glamour from the Christian faith, a faith which dominates the religious life of our country and is held in high respect or unconsciously influences many who do not profess it. If the same conduct as that of which the faith healers are guilty was perpetrated in the name of some other than the Christian religion, how different it would at once appear. Suppose a Hindoo child is

attacked by a crocodile and its pagan mother makes no effort to rescue it because the reptile is sacred or represents a god. She may pray and she may weep but she allows the monster to devour her child and says such is the god's will. The Christian world is shocked at such practices and send missionaries to enlighten the heathen.

The child of a mother who calls herself a Christian is attacked by diphtheria, and the mother instead of making any effort with tangible means to fight off the monster and rescue her child, says the disease is a visitation of the Lord, and if the Lord wills, He can rescue the child, or if the disease destroys him, it was the Lord's doing.

Are not these cases about as nearly parallel as possible? What is the essential difference in the conduct of the the two mothers? There is none.

Their conduct is the same and equally reprehensible. The cases are alike with the exception that the Christian mother substitutes a different deity. It will be argued that that makes an immense difference. Let us bring the illustration nearer home. A negress in Louisiana sees her child wading in the bayou near an alligator. Instead of making a practical effort to rescue the child, the mother kneels down and prays to the Lord to deliver it from danger. What will be said of her conduct? Probably some persons will consider this case vastly different from the other and will admire her sublime faith. But the great majority of sane people will say that she ought to have called the child away or brought it away herself. What is the difference in the result in this case—practically none—the alligator gets the pickaninny. The negress is a fanatic the same as the Hindoo woman, and, if she voluntarily continued a practice which resulted in a loss of life, she should be promptly taken in hands by the legal authorities.

Will any sensible person contend that diphtheria bacilli or other disease germs are more completely under the control of the Deity or amenable to prayer than alligators or other creatures?

They say it is all because of want of faith that diseases afflict us and that if people only would have faith enough diseases could not harm us—they would disappear—there would be no disease. Now, if faith can remove, or Divine power will, when called upon, remove disease, for instance a germ disease like diphtheria, surely the same means might be trusted to remove or subdue wild beasts. Is there any record to prove that of the thousands of Christians who were given to wild beasts in the Roman amphitheatres, any were miraculously pre-

served? Thousands of them were destroyed. Are those saints and martyrs to be accused of lack of faith?

In dealing by law with fanatics, not merely their motives should be judged, but the results of their practices; nor should the particular form of their religious enthusiasm blind us to the enormity of their crime or misdemeanor. The Thugs of India worship the Goddess Devi or Kali, by strangling human beings according to certain prescribed methods, a portion of the victim's goods being devoted to religious ceremonies, and the body burned with peculiar and minutely regulated rites. Now, if a religious belief causes a sacrifice of human life, what is the essential difference whether the murder is done in the name of Devi or of the Lord Jesus Christ? Would Thuggee—the practices of the Thugs, be tolerated in the United States? Not for an hour! Then neither should the practice of faith healers be tolerated even though it is carried on in the name of religion. It is true that the latter do not choose and actively attack their prey; no, but they take Disease as a member into their brotherhood and allow this grim ally to select and destroy the victims, while they stand by and perform the religious ceremonies and prevent others from rendering aid to the stricken ones. Stripped of the gauzy garment thrown about it by our reverence for the Christian religion, partly obscuring its ugly features. "Christian Science" of the "faith cure" is as horribly barbarous a practice as any that has disgraced paganism since the days when mothers laid their babes upon the brazen arms of Moloch and left them there to burn. Picture to yourself those children suffering in the terrible and loathsome clutches of diphtheria, and those parents standing idly by witnessing the sacrifice, and even preventing efforts for their rescue. Suppose those children were attacked by a crocodile or other reptile and the parents behaved thus. Suppose they laid their helpless offspring upon the arms of Moloch—what would be done about it? They would have to stand trial either as to their sanity or for criminality. What shall be said of that pastor and that elder and their complicity in this crime? They are like the priests of Moloch, who performed their ceremonies and made noises upon various instruments to drown the cries of the infants while they were burning.

Where did these deluded creatures get their authority for the claim that God is better pleased that any person should die of a disease than use means well known to preserve them in life and health and usefulness? There is more religion and more common sense in that old saying that "God helps

them that help themselves" than in all the utterances of Mrs. Eddy and her fellow pagans. The sooner sane citizens of every denomination or of no denomination brush aside the thin veil of so-called religious belief and see "Christian Science" as it really is in all the ugliness of its criminality and the fantastic horrors of its insane delusions, the sooner will they take vigorous measures to deal with its devotees according to their practices.—either as criminals or as insane. Their practices equal in atrocity those charged upon the heathen of bygone times and are a disgrace upon the civilization of to-day either Christian or Pagan.

The General Medical Council in England.

The Therapist is not at all satisfied with the general conduct of medical affairs in the United Kingdom.

It gives a brief history of the council as follows:

That powerful body, the General Medical Council, was created in 1862, and brought under the jurisdiction of the Privy Council in 1886. As the latter Department of State is composed of laymen, it follows that there is no real self-government on the part of the medical profession. Fortunately, as a matter of fact, the ultimate powers of the Privy Council, by way both of initiative and of control, are so rarely exercised that the General Council of Medical Education and Registration in the United Kingdom, to give the full legal title, practically has a free hand. What use has the Council made of its opportunities? The answer to that question is writ large in the medical journalism of the United Kingdom. It is generally conceded that some good work has been done in raising and equalizing the standards of preliminary and professional education, but there the matter ends. After nearly forty years of active life the Council stands condemned on all sides as a costly and dangerous anachronism. The only dissentients from that general verdict are to be found in the persons of men who are directly interested in maintaining the old order of things, wherein the evil spirits of autocracy and close corporations reign supreme. As every one knows, the Council derives its income from the registration fees paid by medical practitioners who become *ipso facto* its constituents. The sum derived from the sale of the Pharmacopœia is small, and need not here be taken into consideration. What, then is the constitution of this body, the revenues of which are drawn from medical men? There are twenty representatives of universities and corporate bodies, five nominees of the Crown

and five Direct Representatives elected by the medical profession. In other words, an overwhelming majority of five-sixths of the Council is appointed by the Crown and by corporations that do not contribute one penny to the funds of the Council. The great principle that those who pay the taxes should govern themselves by elected representatives is thus violated. The majority of members come to the Council to look after the interests of the bodies of which they are the nominees. For the general mass of the profession they care nothing, and they have hitherto confined their energies as far as possible to the direction of medical education and the care of the Register. That the latter part of the task has not been attended with conspicuous success has been shown by various police court revelations during the past few years. The Council has struck a good many medical practitioners off the Register, and in other instances has harrassed qualified men with vexatious litigation upon minor matters of title. Its reading of the duties entrusted to it by the legislature has not extended to the protection of the medical profession against the inroads of unqualified practice. There can be little doubt that considerable powers in that direction were granted by Section 40 of the Medical Act of 1858. There is small wonder, however, that under present conditions the Council has no wish to assume so troublesome a task as the suppression of quackery. There seems little hope for the future of the medical profession until this anomalous body is reconstituted upon a broad electoral basis. When that happy day arrives there will be a chance of amending and strengthening the Medical Act in various directions, urgently demanded by the straits into which a long-suffering profession has been driven. The present Council has the ear of government, yet no popular measure of great medical moment has yet been introduced through its agency. Within the last few years the determined action of one or two of the Direct Representatives has made some startling disclosures as the methods and policy of the Council. Much good would undoubtedly follow an increase in the number of Direct Representatives pending the larger root and branch reform of the Council that must one day come. Meanwhile, it is the clear duty and interest of every general practitioner in the Unsted Kingdom to insist on his right to a voice in the election of the representative of his own qualifying body, who under present conditions is nominated by an irresponsible local council or senatus.

The State and the Consumptive.

We take extra-ordinary precautions against the introduction of cholera or plague into our land and yet tuberculosis quietly and steadily does the work of both and more. But we are coming round, the vast machinery of law and public opinion occesionaly gives a few erratic spurts and hisses and we are getting up steam for the work and these are but the signs.

The New York Medical Journal says that it is now pretty generally admitted that tuberculosis will soon be regularly cataloged among the preventable diseases. All that remains is for different State boards of health to declare the disease at least communicable if not contagious. This will afford sufficient basis for compulsory isolation when that is necessary. Naturally, there are many difficulties in the way. Chief among them is the well-known apathy of the public to its own deepest interests, to which must be added the antagonism of that very class most subject to the ravages of the bacillus, and this is no small matter. To discuss means for getting more effectively at this class, a joint meeting of the Philadelphia County Medical Society and the Pennsylvania Society for the Prevention of Tuberculosis has recently been held. The plans of the Preventionists are twofold. First, there is an educational plan appealing not only to the law-makers, but also to the people in the alleys and back streets. This has been partly carried out by means of tracts left with nearly every family throughout the poor districts of Philadelphia. In addition to this work, the Preventionists urge the registration of all cases of tuberculosis, human or animal, but in this phase of the work there is opposition at every step. People object to being labeled "dangerous," and small wonder. It is very human.

The discussion seemed to centre about the second feature of the Preventionists' plan, namely, the establishment of sanatoria and hospitals. Sanatoria alone were shown to be insufficient. A scheme providing special city hospitals for established and advanced cases of tuberculosis, co-operating with one or more sanatoria in high, dry, well-wooded districts, where might be sent those who were convalescent or whose disease was only incipient, seemed to promise the best results. Nothing, it was said, could better or faster educate the unthinking classes to the benefits of isolation and the dangers of promiscuous intercourse than a brief stay of a few of their friends in some such institution. The advantages of institution life, its discipline, the need of care, the danger to self, to family, and to the

community, would all be borne in upon patients and friends in such manner as could only result in a higher standard of public health. That we are naturally tending in this direction is true, as shown by the improvement in paving, lighting, draining, and water supply in most of our cities.

That a decided impetus in this direction would grow out of the presence in each city of an institution for consumptives acting as a feeder to some sanitarium is equally true. For these things State help is needed, but not the kind of State help that looks to the housing of the tuberculous in county homes. The futility of this system in caring for the insane is already too well known. The real need is for large institutions fashioned either after the State hospitals for the insane in Pennsylvania and New York or, what seems even more to the purpose, after the colonies for epileptics in New York and Pennsylvania. Dr. Da Costa well says: "The State must step in if anything is to be accomplished. Individual work is but a drop of relief in an ocean of woe. Koch's discoveries have only added to the hardships of the consumptive by making him a source of danger in the public eye." The duty of the State to protect itself is all too plain.

Cold Water vs. Medicinal Tonics.

Modern Medicine does not think much of tonic medicine because the numerous medicinal tonics, so-called, are universally toxic in character. Whatever tonic effects they may seem to produce, are due to the fact that the system is aroused to resist their influence and to expel them from the body; and while a certain amount of benefit is perhaps derived from the use of such agents, there is always a possibility of serious damage; and doubtless in all cases a considerable amount of harm is done through the toxic influence of the drug, which falls with especial weight upon those organs which are most concerned in its elimination,—the liver and the kidneys.

A medicinal stimulant is a mortgage placed upon the vital capital of the body, which must be paid sooner or latter. It is a draft upon the constitution. A stimulant is simply a means by which the nerve centers are made to give up a little more of the energy which they have stored up; and unless the stimulus is of such a character that the storing power as well as the extending power of the nerve centers is increased, there must be a loss from its employment.

A toxic agent, like strychnia, may provoke the expenditure of nervous energy, but it does not replenish energy; while it does lessen the activity of the kidneys in elimin-

ating tissue poisons, and the efficiency of the liver in the destruction of toxins and leucomains, thus encouraging the development and maintenance of a condition which is, in itself, an indication for the necessity of employing tonic measures; in other words, a medicinal tonic or stimulant aggravates the very condition it is intended to cure.

Nervous Energy.—The establishment in modern times of laboratories for psychological and neurological research has been the means of throwing much light upon the nature of mental and nervous activity. Nervous energy no longer means, as formerly, an intangible, mysterious something, but, as has now been clearly demonstrated, is immediately and definitely connected with material elements found in the interior of the nerve cell. For example, a nerve cell, when in a state of rest, shows a large number of grayish granules, which have been shown to be intimately connected with the storage of energy; so that when the granules are abundant, the cells is like a fully charged battery, ready to discharge under the influence of the right sort of stimulus the maximum of energy which it is capable of exhibiting. On the other hand, when the cells is fatigued, as after prolonged, energetic work, the granules are found to be very few and small, and the cells shrunken and pale.

With these facts in mind, it is easy to understand why such disappointing results have followed the use of strychnia and a very large number of medicinal agents, so-called "nerve tonics," since it is evidently possible that these drugs should in any way increase the store of energy in the cell; and the most that can be expected from them is the excitement of the cells to activity when it has become exhausted to such a degree that a sense of fatigue supervenes as a warning that the store of nervous energy is reduced to a point where any further demand upon it is dangerous, and that rest is imperatively demanded.

The only way that the energy granules of a cell can be augmented is by the assimilation of food from the blood, and the development of energy-containing particles. Cold water surpasses all other agents in its power to promote the normal energy-storing processes. Cold applications also facilitate to a very remarkable degree the discharge of nervous energy when a sufficient store exists, though sometimes it may not be available because its useful application is hindered by the influence of retained excretions or nerve-bnumbing toxins generated within the tissues or absorbed from the alimentary canal. This effect of water

is readily apparent in the influence of the cold bath upon muscular energy, to which attention is called elsewhere, and also in the sensation of well-being, buoyancy, and readiness for exertion which results from the application of cold water.

The tonic effect of cold water are unquestionably to a large degree due to the influence of cold impressions acting through the nerves of the skin upon the sympathetic nerve centers. The great sympathetic nerve controls the blood vessels, glands, heart, the functions of secretion and excretion, and, in fact, all the vital functions of the body. The awakening of the sympathetic to renewed activity, or a balancing of its action, is what is specially needed by the great majority of chronic invalids. The functions of the brain and spinal cord, and through them all forms of nervous activity, are to a remarkable extent influenced by the sympathetic. The sensation of well-being which accompanies the reaction following a general cold application is largely due to the increased activity of the cerebral circulation, brought about through the stimulation of the sympathetic. By its power to influence the sympathetic, hydrotherapy is capable of controlling, restraining, reorganizing, balancing, all the processes of organic life, and through them modifying the functions of animal life to a marvelous degree.

Cold Water a Physiological Tonic.—Cold water is a physiological tonic, and has the advantage over medicinal tonics of all sorts, in that it awakens nervous activity without the imposition of any extra burdens upon any vital organ, and without hampering the activity of any function. The cold bath employed in such a manner as to produce tonic effects accomplishes its results by increasing vital resistance to the causes of pathological processes, by making the wheels of life run more smoothly, by lifting the whole vital economy to a higher level. The impression made upon that harp of a million strings, the skin, with its vast network of sensory, motor, sympathetic, vasomotor, and thermic nerves, arouses every nerve center, every sympathetic, ganglion, every sensory and motor filament in the entire body to heightened life and activity. Every blood-vessel throbs and every cell quivers with a new life; the whole body thrills with quickened impulse; the whole being is translated into a new state of existence.

A person who has never experienced the glow of exhilaration, the invigoration and buoyancy of body and mind, which accompany the state of reaction from a short, general cold application, can not well

appreciate the value or significance of the cold bath as a physiological stimulant. It is not too much to say that it is of all measures known to man the most valuable as a means of arousing to activity the flagging energies of the body, and lifting the enervated invalid out of the morasses and quagmires of chronic disease.

This is the argument in full in favor of cold water and against drugs and we can all do what we think best.

The Wane of Christian Science.

The susceptibility of the public mind to novelties, says the New York Lancet, whatever they may be or however they may present themselves, is not a new thing under the sun, and when this novelty deals with things most sacred to the heart of mankind it has intense interest. Thus it is that the health of the body and the health of the soul are the foundations on which this structure rests. Appealing, as it does, to our love of freedom from pain and our promised ability to enjoy mental and spiritual happiness, and if its dogmas are followed to escape the physical decay and even death itself, it has to those who accept its teachings opened up a new and attractive world. Surely freedom from suffering and delivery from the fear of death introduce its believers into a present heaven. It may be asked "What is the secret of its power, and what the influence by which it propagates itself?" First, it appeals directly to what we love best and prize highest. Acceptance of its dogma is so in keeping with our hopes and desires that it requires no humiliation or sacrifice. The second element of its power is the positiveness with which it asserts itself. It leaves no room for doubt, consequently it finds easy access to the heart and intellect. Its assumption of spiritual and moral power is another factor in its march to conquest. It arrogates to itself so much that is "good report," appealing to Scripture for its warrant, that it draws to itself not a few of the devout and faithful. Having declared that no person has a right to be poor, it has banished from its school those who, while they may need most the consolation it offers, are not worthy. Having boldly declared that pain and sickness are but figments of a disordered mind and that the laws of cause and effect do not enter the dominion of life and need not enter that of death, they cut loose from influences and motives which usually govern humanity. Thus standing on an illusive platform, having excluded from its benefits the poor and penniless, it is able to draw liberally from its followers, and the liberality of this support bears a close relationship to the faith

of its followers and the size of their bank account. Thus by its assumptions of high motives, which are doubtless sincere in the minds of the rank and file of followers, at least for a period of time, some, and doubtless many, of its promoters reap a truly golden harvest. It is better than the Calumet and Hecla when worked assiduously, for it requires no capital save the "thus saith the Lord" of its leaders. It would be an interesting psychologic study to note its operation and progress. It sweeps over communities, obliterates or distorts the faith of the Church, sets at naught the truths of revelation, ignores the principles of science, and vilifies the laws of physiologic and therapeutic truth. Judged by the true standards of religion and science its teachings lead to disappointment and its practice to despair. Notwithstanding its blight will lead, and is leading, to its own cure. Not one of its devotees have yet found a certain barrier to suffering, much less a freedom from the power of death. Notwithstanding its dictum, the laws of the physical and moral world will assert their sway, and like other false doctrines it will leave behind only decay and forgetfulness.

Those who have watched its inception and growth have seen enough of its working to justify the conviction that it rests on a delusive basis. Not a few who were once its ardent advocates are backsliders from its faith. Some of these, having experienced the inability of Christian Science to effect cures and impart comfort, have returned to their former belief. Others, having made shipwreck of their faith, are without compass or rudder, drifting hopelessly or stranded on some inhospitable shore whose latitude and longitude have never been reckoned.

A healthier sentiment is beginning to assert itself and the public demand is being heeded, that proper attention, medical and surgical, shall no longer be denied the sick or injured. The end is not. Doubtless new communities will suffer its invasion. The greed of gold is yet rampant, and its selfish leaders will find new fields for gain. Science and religion, between which there is no conflict, stand together for truth; and when the contest ends the inscription on the tablet, reared over the grave of a lost cause whose cardinal doctrines were error and greed, will be "To the memory of Christian Science, falsely so-called."

Dural Infusion.

The Medical Age says that those on the alert for new therapeutical devices will find that interest attaches to a communication

recently made by Jakob to the *Berliner Verein f. Innere Medicin*, in which he reported some clinical and experimental results from infusions into the dura mater.

The lumbar puncture of Quincke has proved a valuable aid in diagnosis, though its therapeutical importance has been found disappointing. Jakob has endeavored to make an improvement on lumbar puncture by adding to its dural infusion. There is nothing particularly new in the infusion of therapeutic agents into the dural sac. Von Leyden did this as long ago as 1866, introducing quantities of albumen and salt solution into the cranial cavities of dogs. Naunyn and Schreiber modified these experiments by trephining the vertebral bodies of dogs, and then making the infusion, but with all these experiments there occurred a train of symptoms which Von Bergmann designated brain-pressure signs. Jakob's method of dural infusion has been designed with a view of overcoming the dangers of brain-pressure. He injects a medicinal solution only after withdrawing the liquor cerebrospinalis. The injection, in order to avoid bad results, must be done so slowly that fifteen minutes is required for the introduction of twenty-five centigrammes of the fluid. With the observance of this precaution the animals bore the operation without any bad results.

Before using this method in man Jakob decided that it was necessary to determine whether the injection fluid passes simply into the subarachnoid space, or whether it remained long enough in the spinal canal to be of value. He determined this question affirmatively by using colored solutions for injection purposes. The cases best adapted to treatment by dural infusion are, of course, those in which it is important to bring medicinal agents as quickly as possible into contact with the central nervous system, such especially as tetanus, meningitis, and cerebral syphilis, also neuroses without any anatomical basis, and finally such general diseases as those in which it is desirable to do away with the sensory functions. Tetanus naturally seems the most promising disease, as the poison is chiefly found in the central nervous system, and as heretofore little benefit has resulted from subcutaneous injections. Jakob reports one case of puerperal tetanus having been cured by this method. The chances for recovery in this case had appeared very unfavorable. After the second infusion an improvement occurred and complete recovery took place. Each application of the infusion was followed by a rise of temperature apparently as a result of the direct irritation of the heat centers. One case in which dural infec-

tion has been tried, and in which no result was apparent, has been reported by Schustetr; one case by Schultze in which improvement occurred after the second injection; three cases by Heubner without any result; and a few cases reported by Sicard and Martin with good results.

Jakob has also tried this form of treatment in cases of syphilitic disease of the central nervous system. He treated three cases by infusion of iodine. His first case was one of syphilitic history, in which the patient had lain for seventeen days in a comatose state in the hospital. Dural infusion in this instance caused a temporary improvement. In a second case there existed paralysis of the eye muscles, a disturbance of speech, and weakness of the arms and legs, and after dural infusion the weakness of the limbs disappeared, though the other paralyzes were not affected. In the third case dural infusion was repeated several times. After the third infusion the paralysis of the lower extremities was a little improved. While these results are not of a nature to permit of any very decided advantages being claimed for the procedure, the experiment of Bier, who had made cocaine infusions to obtain analgesia of the lower extremities, were so extraordinarily successful, showing that he could perform the most painful operation about the lower extremities without pain to the patient, that it may be proved there is a future place for dural infusion among recognized therapeutical experiments.

The profession should certainly recall Jakob's experiments, especially in cases of tetanus, where dural infusion may be expected to promote results at least equivalent to those which have been claimed for the treatment of this disease by intracranial injections of antitetanic serum.

The Pathology of the Common Communion Cup.

The possibility of various infections from this source is one patent to every thinking and scientific medical mind, according to The Cincinnati Lancet-Clinic. Unfortunately, the dislike on the part of physicians to offend the religious scruples of communicants has prevented any great airing of the subject, though a few observations are scattered through the literatures. When we consider the freedom with which religious subjects are handled at the present time; when we consider the widespread interest and knowledge, with the subsequent laws and regulations in regard to quarantine, compulsory vaccination, expectation in public places, abolition of com-

mon drinking cups in public schools and parks, to say nothing of the volumes of so-called humorous matters regarding the dangers of osculation, such delicacy is a matter of some wonder. It was to consider the possible danger from this source that at a regular meeting of the Brooklyn Pathological Society a general discussion from the various specialties was held. Papers were read bearing on the standpoint of the general practitioner, the dentist, aurist, dermatologist, bacteriologist and surgeon. The several ministers invited also took part in the discussion, and were, from their remarks, in perfect accord with the professional medical testimony.

The infectious diseases are, of course, the ones to be most feared, and diphtheria probably stands in front ranks. When we consider how long the Klebs-Löffler bacillus may remain in the mouths of patients—weeks after their apparent perfect recovery, according to the report of the Philadelphia Health Department, averaging twenty-nine days—this crusade will not appear as a joke. Nor must it be forgotten that diphtheria is by no means a disease confined childhood, so that the objection cannot be raised that the youthfulness of the possible diphtheritic would bar him from taking communion. Again, the germs of this disease may be carried about for weeks in the mouths of healthy individuals who have come in close contact with a diphtheritic, though they have not themselves had the disease, but nevertheless may act as the source of infection through the medium of the drinking cup.

Influenza and pneumonia might be readily communicated in the same way. Our bacteriologists have told us that the mouths of at least 15 per cent. of healthy individuals in health, and all those suffering from or convalescing from pneumonia, contains the diplococcus lanceolatus. In addition, the streptococci and staphylococci, the causes of pus formation, might be easily conveyed in large numbers in this manner. Miller's studies have shown pretty conclusively that the number of distinct micro-organisms that may thrive in the mouth closely approximates one hundred, many of them pathogenic.

We are all of us aware how often syphilis may be acquired innocently; it is not impossible that it could be conveyed in this manner. Indeed, at the Brooklyn meeting several cases were mentioned in which their reporters believed that the disease was conveyed as here indicated.

The constant endeavors to check the spread of tuberculosis is engaging the attention of citizens and health departments

all over the world, yet it seems that this one source is being overlooked. As long ago as 1894 Babcock and Forbush, in the laboratory of the Medico-Chirurgical Hospital of Brooklyn, make a bacteriological examination of the dregs of the communion chalice from one of the churches of that city. In addition to the pus formers, tubercle bacilli were isolated a fact that speaks for itself and needs no comment.

At our private houses the use of individual drinking glasses is not only for convenience, but for increased cleanliness. Many of us have not yet conquered our repugnance to using a common drinking cup at public institutions. If any difference in the two forms exists, it is in favor of the latter, for it can be and is usually well rinsed out, while the common communion cup must necessarily pass from lip to lip uncleaned.

The ministers attending this conference in Brooklyn admitted the force of the arguments presented, and volunteered their aid in the agitation of individual cups, though admitting that considerable personal prejudice must have first to be overcome. It is to be hoped that their endeavors have been crowned with success, and that they may instill a like purpose in the minds of others of their professional brethren, to the abolition of a custom that, to say the least, must be regarded as uncleanly.

The Status of the Acting Assistant Surgeons of the United States Army.

Our Uncle Sam seems to be very careless about the medical men who serve him in an emergency.

The Medical Record says that the civil surgeons whose aid it was found necessary to enlist during our war with Spain would appear to be extremely dissatisfied with the manner in which they have been treated, and are, moreover, bent upon ventilating their wrongs, with the view of having removed the disabilities from which this somewhat anomalous class of army doctors suffer. A mass-meeting of acting assistant surgeons was held at the armory of the Seventh Regiment in New York on December 5, 1899, at which one hundred and fifty of these gentlemen were represented in person, by proxy, or by letter. At this meeting a permanent organization was formed and a constitution and by-laws were adopted. The constitution reads as follows: The object of the association shall be to maintain the patriotic and professional *esprit de corps* and *camaraderie* of the men who during the war between the United States and Spain held the posi-

tion of acting assistant surgeon in the United States army, and to secure rights and to protect their interests of every kind, especially those requiring legislation by the Congress of the United States."

The grievances under which the acting assistant surgeon now labors, in the opinion of the members of the organization, are that although an acting assistant surgeon is expected to fulfil in every respect the duties incumbent on the regular army surgeon, yet he is debarred from sharing in the privileges and emoluments accorded to the latter. He does not rank as an officer. When an acting assistant surgeon is wounded or killed in action or stricken down by disease while on duty, no provision is made for his care or support in the event of such occurrences. If sick while on duty, his pay is immediately stopped, and no provision is made for feeding him, for sheltering him, for giving him medical attention, or for bestowing on his dead body any of the care accorded to the military dead; and lastly, an acting assistant surgeon is not eligible to receive a medal for "conspicuous bravery in the field."

It is also stated that there is a lamentable lack of harmonious feeling between the regular army surgeon and the contract surgeon. The lines therefore of the civil surgeon who volunteers his services in the time of war do not seem to cast in pleasant places, and the inducements offered are not sufficiently attractive to render his position one to be ardently desired. The old contract system might be with advantage, if not entirely abolished, at least considerably modified. It would appear but reasonable that during the time that acting assistant surgeon serves in the army, performing to the best of his ability all the duties required of a regular army surgeon, he should be entitled as far as possible to the same privileges and emoluments. If purchase this country should be suddenly plunged into a large war, the services of civil surgeons would necessarily be again requisitioned. Would it not be better policy to place the status of these men on a satisfactory footing than to continue an out-of-date and unpopular system.

Koch's Tuberculin and its Modifications.

It is difficult, says the International Medical Magazine for March, to recall with entire equanimity the ups and downs of Koch's tuberculin. For those of us who have a pride in our noble profession, this subject must be a source of humiliation. Koch, though an eminent and brilliant pathologist, has never been a physician, and

when he first announced that in his laboratory experiments he had produced a substance by means of which tuberculosis in its earlier stages had been very favorably modified in both animals and man, we should have insisted upon a series of rigid and searching trials of the remedy in hospitals and in private practice under such rules and regulations regarding dosage, repetition, etc., as clinical experience would naturally suggest, before excepting the new method as trustworthy. Our medical societies should have appointed committees of their most experienced and conservative clinicians to conduct such tests and report results.

Instead of this, there was a wild scramble to obtain the lymph, and even Koch's imperfectly founded rules were swept aside and large numbers of consumptive patients, regardless of the stage of their disease, were injected with tuberculin in rapidly increasing doses, that soon became toxic and murderous even to some of the lighter cases. Among those thus recklessly treated were advanced cases, having cavities and daily hectic fever of a severe type from septic complications, though Koch, himself, unsafe as were some of his directions, never sanctioned the use of the remedy in any except first-stage cases.

Naturally, the results were disastrous—tragic and deplorable in the extreme. If one could imagine the profession equally ignorant of the effects of mercury, and some scientist had announced calomel as a cure for consumption in doses of one grain, to be rapidly increased up to twenty grains daily, and a similar craze had been excited, similar frightful consequences would have followed, and yet most of us find it possible to employ calomel safely and helpfully to our patients. The same might be said of arsenic, antimony, digitalis, aconite, veratrum, and even the mild and usually harmless bromid of potassium, which can be pushed hard enough to convert a strong-minded patient into almost a drivelling idiot.

After this reckless abuse of tuberculin had gone on a number of months, with the fortunate cure of some patients and the killing of a much greater number, there came the inevitable reaction, which was naturally intensified by the emphatic declaration of a still more eminent pathologist, Virchow, that tuberculin is a dangerous drug, which can cause a rapid necrosis of tissues infiltrated with tubercles. This was quite as true, of course, as that toxic doses of mercury could melt down even the healthy tissues of the body, or that toxic doses of arsenic could paralyze some of the nerve cen-

ters, as well as set up violent and destructive inflammation of the mucous membranes of the alimentary tract.

There was no more sense in a sweeping and unqualified condemnation of tuberculin because it could be so misused as to poison and destroy life, than there would be in condemning any one of our numerous standard remedies that every student knows possess and exert toxic properties when pushed too far. Nevertheless, the reaction that set in against tuberculin was quite as violent and irrational as the furore with which it was at first welcomed.

A few clear-headed, unstampedable men, however, observed that some genuine cures resulted from the new method, and set themselves patiently to the task of ascertaining how to obtain its good effects and avoid the bad. Loomis, of New York; Whittaker, of Cincinnati; Trudeau, of Saranac Lake in the Adirondacks; Denison, of Denver, Col., and von Ruck, of Asheville, N. C., as well as numerous others, cautiously experimented with tuberculin in smaller doses. These men were mostly able and experienced clinicians, and experts in the diagnosis and treatment of lung diseases. The last three named practiced at health resorts, and, therefore, were dependent mainly upon the favor of the profession at large for such business as came to them. For several years, following the reaction of Koch's lymph, as it was first called, no health resort practitioner could write in favor of the discarded remedy or employ it in his practice to any considerable extent without awakening the most bitter antagonisms and losing the favor and support of many influential physicians in all this country.

Yet Trudeau, von Ruck and Denison, notwithstanding that their livelihood depended upon the favor of the physicians of the United States, most of whom were strongly prejudiced against tuberculin, bravely and honestly went on with their work of investigation, and, having convinced themselves that the remedy was decidedly curative as well as safe when properly used, continued to use it and to report their results. Trudeau was one of the first to experiment in the direction of modifying the lymph, and, in the Transactions of the American Climatological Association for 1892, reported favorably of his attempts in this direction. In the following year his colleague, Dr. I. H. Hance, reported from their joint work a still larger array of cases of phthisis cured or arrested by means of tuberculin and several different modifications of it. In answer to the anticipated objection that the same results might be obtained by climate alone, Dr. Hance

stated, as the result of the observations of Dr. Trudeau and himself, that apparently the effects obtained by the use of modifications of tuberculin "are more permanent and lasting than in other cases, the tendency to relapse in those who have done well with this treatment being less marked than in those who have improved equally without it." On another page will be found a letter from Dr. Trudeau embodying his present views as regards tuberculin. Though very conservative in his statements, he still believes in the efficacy and safety of the remedy.

The Antiviv. Delusion.

The Gazette has taken but little interest in this hysterical discussion, but we have not been altogether unobservant of its general progress.

Why don't the hyperesthetic antis (and aunts) carry their principles (?) and sentiment to a legitimate conclusion? There is the whole serum business that needs suppression by law, first, to spare the horses from being phlebotomized. What rational horse with his horse sense about him wants to be placed *hors du combat* by having nine-tenths of his life-blood sucked out of his veins, by a mechanical vampire that never knows when it has enough? Second, if the serum must be had, the horse should be anesthetized. It is cruel to plunge the aspirating needle into his quivering flesh. The poor dumb beast is helpless in the hands of his merciless tormentors. He hasn't even the consolation of knowing that he is sacrificing himself to save the lives of thousands of human beings. How can men, or things having the semblance of men, have the heart to be so brutal, so lost to all sense of the cruel suffering they inflict?

Furthermore, the horses now tugging at carriages and drawing heavy drays should all be turned out to pasture, where the clover and timothy are knee high (to a grasshopper). Their collars and harness and saddles are quite uncomfortable. Sometimes they positively chafe their necks and backs! And the iron shoes they are compelled to wear are heavy and stiff. They cannot be comfortable or hygienic.

The very birds in the air should be made the subject of national legislation. They tear each other with their sharp beaks and talons, and they catch and tear snakes and mice and young chickens without chloroforming them! It is horrible.

Again, the curs and cats that roam the streets and serenade unwilling auditors at all hours of the night, should be suppressed, or else denuded of teeth, and any other organs they may have, commencing with T.

Half their lives are devoted to battles over bones, and fierce contentions for sex mastery. We venture to say that the actual physical pain inflicted through the latter cause is a hundred fold greater than all the suffering caused by experiments in vivisection since time began.

Another item—a hundred might be cited—a majority of those who are masquerading as parents know no better than to pound and beat their children into ways of holiness and hypocrisy. They often maim them for life, in a frenzy of blind rage. The moral and spiritual humiliation and physical suffering inflicted by fathers and mothers, under the impulse of rage and not reason, is appalling to contemplate. In addition to this wholly unnecessary pain, it brutalizes both the parents and the children. Where are the sweet souls that will organize an anti-child-pounding society?

And why not an anti-spanking-for-spunk society?

Why not look after the innocent babies, and let the few whining curs and guinea pigs, and pink-eyed rabbits, that are sacrificed in the cause of science—mostly, be it remembered, under careful anesthesia, be put out of the misery of this vale of tears and tin-cans-at-the-end-of-the-tail?—*Die-tetic and Hygienic Gazette*.

The Surgery of Malignant Neoplasms of the Liver.

It is only within the last twelve years that any serious and systematic attempts to operate upon malignant growths in the liver have been made, and the earlier cases were attacked in a rather tentative and hesitating way, says the Medical Record. The removal of a tumor in the liver has almost always been attempted in connection with operation for some condition of the gall bladder or ducts, and not as a primary operation. Three of the earliest cases (Bruns, Garré, 1888, Hochenegg, 1889) were of this character, and in two of them certainly the operative work consisted in the removal of a carcinomatous mass secondary to malignat disease in the gall bladder. Since these cases, the reported attempts to remove growths from the liver have rapidly increased in number, and we are gradually becoming able to arrange our knowledge and lay down certain rules of procedure.

The kinds of growth with which we must be prepared to deal are, pathologically considered, adenoma, carcinoma, and sarcoma, the last very rare if primary, and hopeless if secondary, and the other two very little better under the latter circumstances. Adenoma of the liver, though not essentially

malignant, behaves like a malignant tumor, and as a primary growth is commoner than carcinoma, to which it is closely related, and with which it may be described. Carcinoma is very commonly secondary to growths in the stomach, pancreas, gall bladder, or more distant structures, and its prognosis is proportional to the site and extent of the primary growth. Of course, cases are almost always seen too late to be in the least suitable for surgical intervention, though if the tumor was originally in the gall bladder there might occasionally be a chance for its removal with the secondary hepatic deposit. We shall therefore be safe in saying that the only malignant tumors of the liver which are ever likely to be considered as at all operable are some adenomata and a very few secondary carcinomatous deposits, with very rarely a primary carcinoma, in all of which a diagnosis of probability at least is made early. If the tumor is a secondary carcinoma, it is important that the secondary quality is not metastatic, but depends upon continuity of tissue. In the case of true metastasis there must have been wide dissemination of the infection, and deposits will not be limited to the immediate region of the primary mass, so that operative attack is obviously useless. Primary carcinoma of the liver is a rare disease, but may sometimes be amenable to operative treatment,

Keen has recently (1899) added to the literature of the subject the history of a very interesting case in which a fortunate combination of circumstances as to site and conformation made the extirpation of a large tumor a brilliant success. The operation was undertaken with the diagnosis somewhat in doubt, and it was only after opening the abdomen that the growth was seen to be a nodular mass involving practically the whole of the left lobe of the liver. There had been no jaundice, no intestinal symptoms, and, in fact, no reason except that of locality for suspecting the liver as the seat of the trouble. The whole mass was removed, partly by ligature and partly by slow cauterization with the Paquelin instrument, and it is stated that the hemorrhage was never alarming. The size of the wound in the liver was reduced as much as possible by drawing over the peritoneum, and packing was introduced down to the rest of the surface necessarily left raw. Recovery was rapid. Examination of the tumor showed it to be one of the forms of carcinoma, with many areas of necrosis in it, and the case seems to have been one of true primary carcinoma of the liver which came to operation before the lymphatics were involved,

since these were reported uninfected at the time of the removal of the growth.

It is only in such cases in which there is distinct delimitation of the disease that we can hope to do anything of a radical nature, and it is also evident that as disease approaches the hilus it becomes more dangerous and less suitable to any operative treatment. The method of operation is really the only element in the question about which we can make any definite rules, for as regards diagnosis, local involvement, site of tumor, and prognosis, each case is a law to itself, and it is only when we have come to some sort of a decision upon all these points, either before or after the beginning of the operation, that we reach a stage where we can lay down general rules. Experience has shown pretty conclusively that the cautery and ligature alone or combined are the safest and quickest means of controlling bleeding from hepatic tissue, and that pressure with packing is a useful adjuvant. The cauterized wound in the liver should be treated by packing, and the abdominal cavity protected from contamination by the same means. All means of combating the effects of hemorrhage should be ready for immediate use, for it is never certain that we can avoid serious trouble in this regard. Widening experience will probably show that the adenoma is the most favorable for operation, and secondary carcinoma the least so; in fact, that the latter is practically never operable except in a very few cases in which the growth has started in the gall bladder or ducts and has extended to the liver by continuity of tissue. Furthermore, there is no prospect that any but growths in the superficial portions of the liver can be attacked successfully, even supposing that it were possible to make a diagnosis with reasonable certainty when the tumor lies very deep.

Bile from healthy liver tissue will not hurt the peritoneum, but from inflamed and infected gall ducts it will cause peritonitis.

The Controversy as to the Nutritive Value of Alcohol.

Prof. Atwater has gotten himself into a peck of trouble and as usual alcohol at the bottom of it.

The Boston Medical and Surgical Journal says that the results of some recent experiments conducted by Dr. Atwater, of Wesleyan University, upon the nutritive value of alcohol, have awakened anew a vigorous controversy upon one of the important questions of education, the teaching in regard to alcohol in the schools.

Dr. Atwater claims in his published

statements that the results of his experiment prove that alcohol is a food, and that therefore the teaching of pulpit and schools that it is not a food is an error, and should be discontinued. The adherents of temperance and of the present method of teaching in regard to alcohol have replied in several letters and finally by a pamphlet called "An Appeal to Truth," stating that Dr. Atwater's experiments do not prove that alcohol is a food either in the common sense of the term, as understood by people generally and used in books of hygiene, or in the particular sense in which the author uses it, as a food entitled to rank as sugar, starch and fat, and that, therefore, his experiments should have no effect upon the teaching.

The question in dispute in this case is not the actual value of alcohol as a food, but is solely whether or not the conclusions which Dr. Atwater draws from his results are justified by these results.

These conclusions, stated in Circular No. 357, November 6, 1899 (U. S. Department of Agriculture, Division of Publications), are:

(1) That the alcohol was almost completely oxidized in the system.

(2) In the oxidation all of the potential energy of the alcohol burned was transformed into heat or muscular energy.

(3) That the alcohol protected the material of the body from consumption just as effectively as corresponding amounts of sugar, starch or fat.

If we examine the experiments from which these conclusions are deduced, contained in Bulletin No. 69 (Office of Experimental Station, Department of Agriculture) in regard to each of the three conclusions separately, we find that conclusions Nos. 1 and 2 are perfectly tenable and justifiable on the basis of these experiments, but that No. 3 is not justifiable.

The data given in the Bulletin show conclusively that alcohol is oxidized in the body and that the potential energy of this alcohol is transformed to heat or energy of some other kind. It fails, however, to show that the alcohol protects the body materials from consumption equally with sugar or starch or fat. In fact, this data shows an actual loss of nitrogen in the experiments in which alcohol was used, proving a consumption of body material under these conditions. We are thus forced to conclude from an examination of the facts that the authors of "An Appeal to Truth" are correct in their claim that Dr. Atwater's experiments do not justify his statement that alcohol is a food entitled to a rank as sugar, starch or fat in its effect in protecting the body materials from

consumption. In fact, the experiments as they stand prove the contrary.

Are they justified also in their claim that his experiments fail to justify him in his conclusion that alcohol is a food in the ordinary sense of the term, a conclusion implied in his statements in the report which refer to alcohol "with other food materials"? We think that they are so justified.

The two conclusions in regard to the metabolism of alcohol which Dr. Atwater's experiments did warrant, namely, that alcohol is oxidized in the body, and that the potential energy of the alcohol is there liberated, do not by any means prove that alcohol is a food in the ordinarily accepted sense of the term "food." To demonstrate this fact, it must be proven that the sum total of the effect of the ingested alcohol is useful rather than harmful in the maintenance of the animal economy. And this Dr. Atwater has not proven. And it has not yet, as far as we know, been demonstrated by any experiments. In fact, the weight of experimental evidence at the present time is decidedly against such an assumption. Thus the experiments made upon large bodies of men under conditions of sustained labor, as those conducted in the English, German and American armies, prove to us that the effects of the use of alcohol, in the amounts ordinarily spoken of as "moderate," make the soldier less rather than more fit for work, and decrease rather than increase the amount of energy which he can put forth under given conditions. That the use of alcohol in large amounts is harmful no one doubts.

It is possible that it may some day be proven that the effect of very small amounts of alcohol upon the economy is such as to entitle it to be considered as a food. But it has not yet been so proven. And until it is, the advocates of the temperance education are quite justified in any protest which they may make against the assumption that alcohol is a food.

As we have said, the whole truth in regard to the action of alcohol in the body or the question of its nutritive value is not known. If it is at some future time proven that small amounts have such a value, then alcohol must be classed as a food.

It must be pointed out, however, that even such a result would not entitle it to be classed as a desirable or hygienic food, which is the sense in which people in general understand the meaning of the term "food." Against such inclusion there are many weighty arguments, as, for example, the fact that the tendency to the formation of the alcohol habit from taking these small amounts is so great that the danger of its

use far exceeds any possible benefits which may be derived from it.

These remarks are not intended as a justification of *all* the teaching upon the subject of alcohol which has up to the present time been advocated or employed by the agents of temperance education in the schools. We wish merely to point out that, in regard to the teaching upon this particular question, as to whether or not alcohol is a food, their position has not yet been successfully controverted by scientific evidence. Whether the present teaching upon this point is the wisest under present conditions of knowledge is another question.

It is our personal opinion that the wisest course at present would be to base the prohibition of alcohol advocated in the teaching upon the fact that alcohol is an undesirable substance, the use of which in any capacity in health is quite unjustifiable under the laws of hygiene, rather than upon the statement that it is not a food or the unqualified statement that it is a poison. For while the latter statements in unqualified form have, at the present time, the preponderance of scientific evidence in their favor, still our knowledge in this regard is not complete. The former statement, however, is based upon facts and arguments so established that it may be regarded as true beyond the shadow of a doubt.

The Ideal Physician.

According to the Denver Medical Times the ideal physician is a lover of humanity and a benefactor of his race—not in any mawkish or sentimental sense, but in an enlightened appreciation of the needs of humanity and the resources of science. The ideal physician is an enthusiast in regard to his profession. Science is, indeed, his mistress; and to relieve pain, to cure disease or to assist nature in any imperfect action, or arrested development, gives him as keen a delight as the artist finds in completing a beautiful picture, or the sculptor finds in carving a noble statue. The ideal physician has positively no personal vanity. The foolish smiles of motiveless women suggest to him nothing more sentimental than the play of certain facial muscles. The blandishments of the artful intriguante are to him a mere waste of time, if not suggestive of grave physical disorders that medicine cannot always reach. Being devoted to his profession, the ideal physician is superior to false pretenses or hollow make-beliefs. He does not clothe himself with mystery as with a garment and refuse to give any hint concerning the nature of his remedies; he

has no fear that his entire stock in trade can be stolen in a single prescription. He is as frank and honest in dealing with his patients as good business men are in giving the right change when a purchase is made. In complicated nervous disorders, requiring time, patience, good nursing, proper feeding, abundant resting and mental diversion, more than medicine, the ideal physician states the case frankly to those having the patient in charge; he does not assume the office of nurse, nor contract a bill for bread-pills when no medicine is required; he has enough to do that is necessary and remunerative without making a pretense of doing that which is not required, for a financial consideration. His manner is grave, sympathetic, frank; yet, withal, full of dignified reserve. What he says has weight, because he does not speak unnecessarily or irrelevantly. He has no time to waste with mere whims—no leisure for trifling with feminine affections or frivolous coquetties; yet a case of real distress never fails to awaken his sympathies and elicit his assistance. Hence it is that when he enters a sick room, or confronts a patient, he inspires confidence, and this restful mental attitude on the part of the patient gives a sense of relief even before any medicine is taken. A pure and lofty nature brings healing even with its presence, and the ideal physician holds as sacred and potent an influence in the hearts of his patients as that accorded to priest or prophet.

Women no less than men frequently experiment with their fellow creatures from a morbid curiosity to find out how much strength or weakness belongs to the character they seek to explore, yet even these poor skeptics of human goodness are forced to honor the man or woman whose uncompromising rectitude rebukes their foolish search for that which is unworthy.

No man has it in his power to do more good in the world than the sympathetic, skillful and conscientious physician. He is admitted to the inner sanctuary of domestic life; he can heal or widen the breach between husband and wife that disordered nerves, financial trouble, or mental obliquity may often induce even among those who have the best intentions. He knows that when a woman's nerves have reached a certain tension her husband is a "fiend incarnate." He knows that when a man's immoralities have exhausted his life-forces, clouded his brain, and hardened his heart, this man's wife becomes of all women most unattractive, and the neglect or abuse which she must endure reduces her to a physical condition which the physician is expected to remedy with medicine. He must hear

the complaints of both with the patience of Job and the wisdom of Solomon; he must do what he can do and decline to pretend to do what he cannot do. He must distinguish between a temporary mood and a permanent condition on the part of both and govern himself accordingly.

Lastly, and above all things, the ideal physician never reveals by any sign or token the secrets confided to his professional honor. Hence it is that he receives not only the confidence and respect, but the friendship and devotion of those to whom he has ministered.

The Surgical Treatment of Gall-Stones.

The extraordinary success which has attended surgical intervention for the relief of symptoms dependent upon gall-stones, before these latter have produced widespread inflammatory changes, says the *Therapeutic Gazette*, is scarcely realized by the profession because the majority of these cases are not reported, and because it has been the habit of doctors to believe that gall-stones are peculiarly amenable to medical treatment.

Naunyn's statistics on this point are scarcely reassuring, since he reports that of 150 cases of all kinds which he has treated, not more than forty per cent were cured; and that in many of these, symptoms persisted which led him to believe that the cure was not a complete one.

Two notable papers upon this subject have recently appeared—one by Mayo (*Annals of Surgery*, October, 1899), the other by Kehr (*Archiv fur Klin. Chir.*, 58 Band, 3 Heft).

Mayo, briefly summarizing the results of his experience, states that during the past eight years he has performed 105 operations on the gall-bladder and bile-ducts.

In seven cases the exploratory incision was negative, no gall-stones being present; in two of these a diseased appendix was found to be the source of trouble; in one a movable kidney; in four no cause could be discovered. Of the remaining ninety-eight operations and explorations for non-malignant disease, but two perished; for gall-stones of the bladder or cystic duct, or both, cholecystectomy was performed sixty-four times with one death; in eight cases cholecystectomy was performed for the relief of infection of the gall-bladder, and in four of these stones were present; cholecystenterostomy was performed four times successfully. In the eleven cases of choledochotomy performed for the removal of stones from the common duct, all recovered; in five of these the gall-bladder also contained

stones; in three cases the liberation of adhesions relieved pain.

Kehr has performed in all 408 operations for the relief of gall-stones. Of these forty-nine, or twelve per cent, perished, a mortality much larger than Mayo's. Of the 202 laparotomies performed in the last two and two-thirds years, thirty-two died—that is, sixteen per cent; whilst in 206 operations performed in the seven years preceding, seventeen died—a mortality of eight per cent. Eliminating those cases of death due to a preexisting and lethal lesion (such as wide-spread carcinoma or suppurative cholangioitis, or profound sepsis) and those in which the liver operation was not responsible for the lethal ending (such ones, for instance, as required enterostomy or resection of the pylorus), there remain of the cases recently operated on 177, with seven fatalities, or 3.9 per cent; and of the earlier cases 196, with seven fatalities, or 3.6 per cent.

The author states that an early operation for the relief of stone in the gall-bladder or cystic duct is absolutely safe, though his tabulation does not seem to prove this. Of fifty-five patients subjected to cholecystectomy (the procedure which he strongly recommends when the gall-bladder is chronically diseased and sunken), but two died; of twenty-nine patients subjected to cholecystotomy and drainage of the liver, four died; and of thirty-five patients subjected to complicated operations, twenty-three died.

These figures deal only with his last series of cases. Kehr advises medical treatment, particularly a Carlsbad cure, in cases of gall-stone accompanied by acute obstruction of the common duct, unless this is unduly persistent and accompanied by fever or marked weakening of the pulse; in cases of inflammatory processes in the gall-bladder, with or without jaundice, when they recur seldom; in cases of frequent cholecystitis, followed by the discharge of stone with the excreta; in very fat, gouty, diabetic, or otherwise diseased patients, in whom narcosis would be dangerous. In patients who have been subjected to operation Kehr states that such should undergo a careful Carlsbad course. He believes that operation should be advised in acute seropurulent cholecystitis and pericystitis; in adhesions resulting from these conditions and causing symptoms such as are painful or obstructive; in chronic obstruction of the common duct; in chronic obstruction of the cystic duct; in all cases of cholelithiasis, which begin with moderate symptoms and steadily become more severe until the patient is crippled; in suppurative cholangioitis and liver abscess;

in perforation and peritonitis; in morphinism due to gall-stones. In cases of doubt, operation should be performed. He holds that all anastomosis between the gall-bladder or ducts and the intestine or stomach should be avoided if possible, and implies in his paper (if he does not actually state it) that were physicians fully alive to the much greater surety and safety of cure afforded by the surgeon, in Germany alone there would come to the operating table (suffering from large stones irremediable by any other means) yearly 34,000 patients. Riedel places this number at 90,000.

The admirable results shown by these two papers should encourage physicians to refer their cases of gall-stones to the surgeon at an early stage, when the cure is likely to be as certain and safe as that which attends the modern treatment of stone in the bladder.

MISCELLANEOUS.

Anopheles and Malaria.

A valuable paper by Professor Celli, the Director of the Institute of Hygiene in Rome, has appeared in a recent issue of the British Medical Journal. The following comments are made editorially:

"The older observers had noted, what is indeed a part of the folk-lore of malarial districts of Europe, that malaria was most likely to be contracted about sunset and at night. Anopheles lies hid by day and issues forth in quest of human blood at sunset, and pursues its search through the night. Again, the older observers noted that the malarial 'miasm' was often very limited, and did not extend to any great elevation, so that residence on top of a rock or in the highest story of a lofty house was some protection. It is known that the mosquito does not fly far from its birthplace, or mount high in the air. Again, the older observers knew that the malarial 'miasm' was not carried by high winds, and it is notorious that the mosquito does not fly on stormy nights.

"Professor Celli thus traces the cycle, for the maintenance of which, in Italy at least, man is essential. Beginning with the great multiplication of mosquitoes at the end of June or the early part of July, it is found that some of these are infected by the malarial parasite. They convey the infection to man, thus bringing about the great increase in the number of attacks of malaria observed in July and August, but sometimes continuing into the fourth quarter of the year. During the first and second quarters of the following year the malarious

cases met with are generally recurrence of the infections contracted in the third or fourth quarters of the preceding year, and it is by these recurrent cases occurring even as late as June, when the mosquito once more becomes active, that the infection is again transmitted to the insect, and a new epidemic started.

"Professor Celli observes incidentally that in Italy children are more affected by malaria than adults, and Professor Koch lays great stress upon this point, making it indeed the test of the extent to which malarial prevails in a population, since he finds evidence that adults in a malarial district having survived the infection in early youth have acquired a more or less complete immunity. This observation Koch believes may be of great importance in prophylaxis.

"Both Celli and Koch lay great stress on the part which the cultivation of rice plays in favoring the multiplication of mosquitoes. 'The more rice fields,' Koch reports, 'there are in the neighborhood of a place, and the nearer they are, the greater the abundance of mosquitoes'; and Celli observes that it is well known that 'the formation of rice fields causes the reappearance of malaria where it had become extinct, and where it already exists they are a very active focus of production.' Rice is best cultivated on low lands subject to occasional inundation, but where inundation cannot be depended upon very copious artificial irrigation is resorted to.—*Boston Medical and Surgical Journal*.

During the first years of his career as an actor, Colonel W. F. Cody had in one of his theatrical companies a Westerner named "Brocho Bill." There were Indians in the troupe, and a certain missionary had joined the aggregation to look after the morals of the Indians. Thinking that Broncho Bill would bear a little looking after also, the good man secured a seat by his side at the dinner table, and remarked pleasantly, "This is Mr. Brocho Bill, is it not?"

"Yaas."

"Where were you born?"

"Near Kit Bullard's mill on Big Pigeon."

"Religious parents, I suppose?"

"Yaas."

"What is your denomination?"

"My what?"

"Your denomination!"

"O—ah—yaas. 44 Smith and Wesson."

—*Argonaut*.

Absolute permanent baldness following the administration of a quarter of a grain of thallium is reported by Jeanselme.

The Doctor's Dream.

Last evening I was talking
With a doctor, aged and gray,
Who told me of a dream he had,
I think 'twas Christmas day.

While snoozing in his office,
The vision came to view,
For he saw an angel enter,
Dressed in garments white and new.

Said the angel, "I'm from heaven,
The Lord just sent me down,
And bring you up to glory,
And put on your golden crown.

"You've been a friend to everyone,
And worked hard night and day,
You have doctored many thousands,
And from few received your pay.

"So we want you up in glory,
For you have labored hard,
And the good Lord is preparing
Your eternal, just reward.

Then the angel and the doctor
Started up toward glory's gate,
But when passing close to hades,
The angel murmured, "Wait.

"I have a place to show you;
It's the hottest place in hell,
Where the ones who never paid you
In torment always dwell."

And, behold, the doctor saw there
His old patients by the score,
And grabbing up a chair and fan,
He wished for nothing more:

But was bound to sit and watch them,
As they'd sizzle, singe and burn,
And his eyes would rest on debtors
Whichever way they'd turn.

Said the angel, "Come on, doctor,
There's the pearly gates I see;"
But the doctor only murmured,
"This is heaven enough for me."

He refused to go on further,
But preferred to sit and gaze
At that crowd of rank old deadheads,
As they lay in the blaze.

But just then the doctor's office clock
Cuckooed the hour of seven,
And he awoke to find himself
In neither hell nor heaven.

—*Woodyard Kindling, in the Franklin, Pa., Evening News.*

In burns about the neighborhood of the joints, keep the limb flexed if the burn is on the extensor side, and extended if the flexed side is affected.

Creosotal in Acute Pulmonary Diseases.

The action of creosotal in acute diseases of the lungs, such as pneumonia, broncho-pneumonia, grip pneumonia, &c., Dr. F. Hoelscher says (Tagebl. Kongr. z. Bek. d. Tuberkulose) is even more remarkable than in chronic cases, as is shown by the researches which have just been published by Cassoute and Corgier from the hospitals of Marseilles. Pneumonia is cut short by the early administration of large doses of creosotal, and the course of the disease is noticeably shortened when the drug is administered later on in the disease. The typical fall of temperature occurs in twenty-four hours after the administration of the drug. The afebrile condition is a permanent one if the exhibition of the creosotal is persisted in. The temperature rises, however, if the administration of the remedy is discontinued before the auscultatory signs have completely disappeared. The sequelæ that so frequently occur, and more especially tuberculosis, are completely avoided by the creosotal treatment of acute diseases of the lungs.

New Method of Treatment of Wounds.

Schleich, in his book on the treatment of wounds, which has recently appeared, has attempted to simplify the methods of minor surgery so as to make the general practitioner independent of what he calls the monopolization and centralization of surgery. He disputes the assertion that bacteria are the chief source of infection. He looks upon them as the accompaniments of uncleanness, of which their presence is sufficient proof, but he rejects the idea that they are the cause of sepsis and pyæmia, for the reason that these diseases occur in the presence of very different forms of bacteria. He supports his ideas by the citation of other illustrations. For example, characteristic fevers follows the ingestion of spoiled meat and fish, although under these circumstances only small numbers of the ordinary streptococci and staphylococci can be shown to be present. Schleich insists that the operator should disinfect himself immediately after contact with infectious material, so that at any time he may be looked upon as nearly aseptic. Hand brushes he describes as universal labyrinths for grease and dirt. He rejects all sorts of chemical methods of purification, partly because they do not destroy the bacteria and partly because they cannot be thoroughly carried out. He advises a mechanical cleansing calculated to wash away the bacteria. He uses a "marble soap," which is made of a special alkali (steral) and con-

tains marble-dust to take the place of brushes. After the hands are washed they are smeared with wax paste to close the ducts of the sweat and fat glands, which no method is capable of disinfecting. In the treatment of wounds he has small regard for antiseptics, which can only control to a limited extent the development of bacteria. He advocates an early and wide incision in suppurative processes and tamponade of the wound with gauze. He rejects all drains, and uses silk instead of catgut, because he does not believe that the latter can be perfectly sterilized. He boils his silk and immerses it in gelatine to preserve it from infection; the gelatine is melted off with hot water at the time of use. He lays stress upon the necessity of introducing "homogenous substances" between the edges of infected wounds. If this can be accomplished, such wounds will heal in the same manner as healthy cut surfaces. Glutol, a dry and sterile formalin-gelatin, fulfills this requirement, —*Medical Progress*.

Inhalation of Formalin in Phthisis.

The British Medical Journal of January 28th, 1899, brought out a most interesting paper by Dr. William Murrell, dealing with the essential oils, and other volatile substances, in the treatment of phthisis, in which he discards the use of essential oils, but favors the use of Formaldehyde, or Formalin, which he subjected to severe tests for the inhibition of the bacillus tuberculosis, showing that the addition of glycerine retarded the results, which with Formalin pure and simple answered all his expectations.

The cases which Dr. Murrell reports all show that with the Formalin treatment, without any addition, he was uniformly successful, the patient being told to inhale the substance mostly by dropping it on lint, and thus allowing it to be absorbed by inhalation.

We call attention to this contribution of Dr. Murrell, while we wish particularly to make some remarks on the paper of Dr. Lardner Green, which we find in the same journal under date of January 20th last.

The author fully endorses, by personal observation, the conclusions Dr. Murrell has come to, and it is satisfactory to notice that he also has applied this gas by inhalation, to the full advantage of his patients.

Dr. Lardner Green, however, introduces into his prescription two incompatibilities, which we consider it desirable to point out, and Dr. Murrell's data will assist or confirm, from a bacteriological point of view,

the advice not to introduce glycerine. There is, besides, an abundance of literature showing that glycerine forms with formaldehyde a chemical compound named glyceroformal, which impairs the non-toxicity of Formalin, and although this compound has been recommended for disinfecting purposes, closer study has shown that the more toxic properties of this body by no means assist antiseptic action, but rather impede it. As we said before, this has been confirmed by Dr. Murrell, and it is by no means desirable to encourage the mixing of these two bodies.

As Dr. Green has experienced, some persons are more susceptible than others to the fumes of Formalin, and for this reason he recommends, where indicated, the addition of aromatic spirits of ammonia. Truly enough, this addition will effect a material reduction of the penetrating effect of Formalin gas, for the very simple chemical reason that Formalin gas has great affinity for ammonia, with which it readily forms a neutral compound—Formamide—and, as will be understood, the binding up of Formalin, thereby reducing very effectually its activity as a bactericide.

The very simple logic would be, that if a patient finds the fumes of Formalin irritating—that is, more so than he can conveniently bear—let him reduce the solution by a further addition of water: try half the strength, or even much less—say, one-tenth—which will still be effectual as an inhalation; but it will be found that even the sensitive patient will gradually be able to bear the greater volume of gas, similarly as a visitor to the room of a patient where a free use of Formalin is made will, after a very short time, fail to notice the first inconvenience of the presence of the gas.

The great advantage of Formalin gas in the treatment of phthisis is shown by a great number of authors, and also that it is equal—nay, preferable—in most cases to the open-air treatment, unless the open air can be had on the top of a mountain and well removed from the contamination of a populated community. The simple reason for this is the great affinity of Formalin gas for all nitrogenous and sulphur compounds, which it quickly eliminates from the air of the room occupied by the patient, and for which reason it will, under all conditions, favor the general treatment of disease and minimize its symptoms. In this respect the use of Formalin offers the inducement of further study of what cannot fail to be a most gratifying subject.

No matter what you say to a chemist, he always has a retort.

A Merited Rebuke.

There is, it is to be feared, a large class of men in the profession who thoroughly deserve the following scathing rebuke which the editor of the Philadelphia Journal administers to the omnipresent vender of suggestive and obscene "stories:" We have no wish to exaggerate the facts either as to the importance or as to the amount of smut masquerading as wit in some of the lecture-rooms, journals, and in the conversation of some physicians, but we think all bright clean men will agree that there is altogether too much of it. We are confident that medical students are fully as free from the vice as any other class of young men, and in their behalf as well as on the score of professional decency such a purity should be guarded rather than broken down. But is there a practitioner that does not look back with shame and disgust to the nauseous 'story-telling' of some shameless 'professor' of his college days? A room full of young chaps will perhaps laugh and applaud—and then go away—at least the best of them—to loathe the teacher who thoughtlessly debases his office and corrupts his audience. We have known some of the highest officers of a great medical organization who, wherever they went, left behind the pollution of obscenity and nastiness. We have known a professor of the history of medicine who peppered his lectures with stories erotic and 'tommyrotic' that showed how pitiable was his reading of history, and his conception of duty. If wit happens occasionally and accidentally to be touched with this diabolism, men of the world will not wince, and may even laugh the more heartily, but he is an ass and a knave who from choice and habit delight in pornographic reek."

A little cheerful wit is often a pleasant and useful medicine for doctor as well as patient, but when it is flavored with filth it becomes a nauseating dose indeed. Certainly no class of men should avoid such coarseness or obscenity more than physicians, whose constant association in the home life of the community demands the language and manners of gentlemen. Nor has indecent language, at any time, a place in the vocabulary of a cultured physician. Closely allied to outright decency in a class of literature with which a few medical journals are filling their pages and which certainly cater more to the pruriency than to the necessities of their readers, while masquerading in the garb of science. Those multiplied discussions of erotomania and sexual anomalies and disquisitions on the nature of lust may be of occasional interest to the alienist, but to the average man are

of no more value than the inscriptions on the Rosetta stone. He reads them for the same reason, and probably with the same sensations, that another less "scientific" man absorbs with eager avidity his "Sapho" or crowds to see the latest degenerate drama. In order to be honest with ourselves we need to get down to first principles.—*Medical Standard*.

Care in Ascribing Causes.

Patients suffering from any of the surgical diseases are never content unless they are able to ascribe their origin to some special mechanical injury. Be careful how you agree with them. A woman with cancer of the breast, for instance, always remembers some blow or push she received at some former time. It probably had nothing to do with it, but unpleasant accusations or even lawsuits may arise from too ready acquiescence on the part of the surgeon. The writer remembers a bad case of enlarged tonsils with adenoids in a child whose mother accused a teacher of bringing on these ailments by pulling the child's ear a month previously. The disease had unquestionably existed a long time. It is always best for the practitioner to be exceedingly guarded in ascribing causes; in the first place because, as a matter of fact, he can often know but very little in regard to them and in the second place because he may involve other people and himself into trouble that had better be avoided. Great caution is especially advisable in venereal cases.—*International Journal of Surgery*.

Water and Obesity.

A physician of Erlangen, Dr. Lorenzen, experimented with himself for the purpose of seeing the effects of inhibition of water upon the body weight. For four years he indulged in the not ascetic task of drinking two gallons of beer daily, and discovered the remarkable fact that he had increased his weight seventy-two pounds. On stopping the ingestion of water (beer) he reduced his weight fourteen pounds in seven days. Dr. Lorenzen's experiments are being performed daily by a large class of our esteemed Teutonic citizens.—*Dietetic and Hygienic Gazette*.

Patient: "Doctor, I can't sleep at night. I tumble and toss until morning."

Doctor: "H'm, that's bad. Let me see your tongue. (After diagnosis) Physically you are all right. Perhaps you worry over that bill you've owed me for the last two years!"—*The Scalpel*.

The Uses and Effects of Gude's Pepto-Mangan.

By Dr. Julius Heitzmann; Vienna.

The employment of iron preparations both in essential anæmia (chlorosis), and in the symptomatic forms of this affection produced by severe losses of blood, dates from the earliest times. Long before the chemical relation of this effect was known, these remedies were administered on the ground of pure empirical experience.

When Hannan pointed out the high significance of manganes, as well as of iron, with regard to the absorption of oxygen by the blood, and when this discovery was confirmed by Rühle, effects were made to produce, by combination of both remedies, preparations which would best fulfill the therapeutic indications in all directions.

Former attempts of this kind failed to give the desired results. The aim was to combine both metals in such a form as would enable them to be absorbed throughout the entire extent of the alimentary canal, and at the same time be devoid of disagreeable taste which would prevent their prolonged administration. After a series of experiments made in this direction I found in the preparation discovered by Dr. A. Gude (Pepto-Mangan Gude) a remedy which fulfilled the above requisites, and can recommend it most heartily.

Pepto-Mangan—Gude is a clear, dark, wine-red fluid, having an agreeable, non-metallic, astringent taste. The latter property gives it a great advantage over other similar preparations, for the remedy is always taken with pleasure, and may therefore be administered for a long time without exciting the disgust of the patient. No irritation of the stomach is produced, nor is the digestion disturbed in the least respect; indeed, as regards the latter, a stimulation of the long-absent appetite could be demonstrated within a short time.

The Pepto-Mangan—Gude, usually mixed with some water, is prescribed in doses of two or three dessertspoonfuls, increased to as many tablespoonfuls per day. An especially agreeable manner of administration is by addition of cold milk, which then assumes a light chocolate color and an agreeable taste. Prescribed in this form we obtain this preparation everything that could be expected from a remedy for anæmia. The Pepto-Mangan—Gude may also be mixed with white and sweet wines, excepting the red wines which contain tannic acid, and an occasional change in the manner of administration is sometimes of advantage, especially in the cases of children.

The diet, during the use of this preparation, should consist of milk, meats—especially ham—fowl, soft-boiled eggs, and other easily digested foods. On the other hand, sour and fatty foods, red wines, and raw fruits are to be avoided.

The remedy is to be administered for a number of weeks, especially in cases of chlorosis, but in the case of young girls up to 12 years of age it is best to commence with a daily dose of two teaspoonfuls (ten grammes). In adults the dose of Pepto-Mangan—Gude may be increased in a few days to one tablespoonful twice or thrice daily, or even to ten or twenty grammes. The preparation should be well protected from the light, and preserved in a cool place in a well-stoppered bottle.

I have employed the Pepto-Mangan—Gude with much success both in chlorosis and in cases of anæmia in girls and woman due to the loss of blood, menorrhagia, metrorrhagia, inflammation of the pelvic organs, peri- and parametritis, or prolonged leucorrhœa. In almost every instance I observed within a short time increase of appetite, improved nutrition, healthier color of the face, and increase of weight. I was surprised to learn how much more readily the Pepto-Mangan—Gude was taken than similar preparations, without ill effects even after protracted use.

To illustrate my remarks I will cite a few cases:

I will first report a case of chlorosis treated with this remedy, which was under constant observation. The patient, a school girl aged 16, began to menstruate one year ago, but after appearing regularly for three periods the flow suddenly ceased, probably in consequence of mental overexertion, and symptoms of chlorosis soon developed. The various preparations of iron were tried, but were either not well borne or excited so much disgust that they were discontinued by the capricious patient. A milk cure was prescribed, but followed for only a short time. When, however, I resorted to the Pepto-Mangan—Gude I was surprised to find that the girl took it willingly and that it was well borne. She made a rapid recovery, and after the use of two bottles had regained her former healthy, color, while her strength and menstruation returned.

CASE II.—A married lady, aged 24, had acquired—apparently of abortion at a very early period—an intense peri- and parametritis with an exudation of the size of a child's head. The latter disappeared almost completely under suitable treatment and rest, so that only a slight induration was present in the parametrium after three

weeks. Owing to the considerable anæmia and loss of appetite, however, the patient recovered very slowly, and for this reason I ordered the Pepto-Mangan—Gude. A few days after its use the appetite reappeared, recovery ensued rapidly, and five weeks later her health was completely restored.

CASE III.—A married lady, aged 30, had suffered from leucorrhœa due to catarrhal inflammation of the vagina for two years, and although the local trouble had been much relieved, she continued pale and weak. As her celorotic daughter at the time was taking the Pepto-Mangan—Gude with marked benefit, I advised her also to try this preparation. She followed my advice, and after fourteen days the weak sluggish, and pale woman seemed as if transformed. She has since regained her former health.

These few cases, which were under continued observation, will confirm what has been said above regarding the manner of application and effect of the Pepto-Mangan—Gude. I regard it as superfluous to cite other cases, since a few closely observed cases teach more than a host of superficial observations.

On the ground of my experience I consider myself warranted in directing the attention of physicians to this remedy, and feel convinced that further trials will give equally favorable results. Even in cases where local treatment is necessary the Pepto-Mangan—Gude will prove a valuable auxiliary in our treatment.—*Allgemeine Wiener medizinische Zeitung*, xxxvi

Midwifery in New Mexico.

I have a little item of observation in the obstetrical line that has appealed to me and no doubt would be interesting to you.

I had occasion recently to witness the delivery of a Mexican child by a native midwife.

Before I begin I will say that these Mexicans are a mixture of Indian and Spanish, and are almost nothing more than savages.

I was called (there has never been an American physician in this section) on account of delayed (?) labor; the woman had been in labor five or six hours. I saw that everything was all right, and thought it a good opportunity to see how they do it where there are no "doctors." This may not be new to you but it was exceedingly interesting to me.

The midwife (?) sits "tailor" fashion between the limbs of the patient (the patient on her back), and awaits the coming of the child and receives it in her outstretch-

ed hands. She points to the caput succedaneum and shakes her head (seems to understand). As soon as the child is born it shifts for itself, and the midwife begins immediately the delivery of the placenta. She manipulates the abdomen by pressing backward and downward, wrist on pubes and palm over uterus, right hand; her left hand partially in vagina, manipulating—I couldn't tell how. Midwife instructs patient to poke a piece of rolled paper (ready prepared) down her throat, which excites "gagging" and wrenching, and in that way aids expulsion. The placenta soon comes away, and she then lets the mother shift for herself and wraps the baby and placenta in a cloth (still attached) and deliberately sits down on the ground beside the bed (?)—a lot of blankets on the ground—and rolls and lights a cigarette and takes a few puffs, then proceeds to skein some white cotton thread from a spool and twists it very carefully into a very neat cord about one foot long and the diameter of a shoe-string. She then unwraps the baby and placenta and ties the cord very neatly and securely about two inches from the child's abdomen, cuts the placental side and burns the stump portion beyond the tie (distal end) almost to a crisp with a lighted candle; oils the baby with sweet oil and her work seems to be done.

There were no aseptic precautions whatever, and the singeing of the stump the only antiseptic one.

I understand the mother made an uneventful recovery. I have not yet inquired into the mortality rate, but judge it is very low, considering. These people are very filthy.—C. E. BEESON in *Cincinnati Lancet-Clinic*.

Pepsin is undoubtedly one of the most valuable digestive agents of our Materia Medica, provided a good article is used. Robinson's Lime Juice and Pepsin, and Arom. Fluid Pepsin, (see ad. in this number) we can recommend as possessing merit of high order.

The fact that the manufacturers of these palatable preparations use the purest and best Pepsin, and that every lot made by them is carefully tested, before offering for sale, is a guarantee to the Physician that he will certainly obtain the good results he expects from Pepsin.

"It takes the starch out of me to be chewed up this way," growled the potato.

"Don't fret," said the sirloin as they tobogganed down the esophagus, "you'll feel sweeter in a short time.—*American Medical Journal*.

Rockbridge, Va., Alum Water.

That are of Intrinsic Value to the Medical Profession.

Extract from a paper read before the Atlanta Society of Medicine, April 26, 1887, by JOHN S. TODD, M. D., Professor Materia Medica and Therapeutics, Atlanta Medical College, Ga.: Ex-President of Georgia Medical Association; not read in our interest, but in the interest of Science and his profession:

"Some four and a half years since I had, among other cases, one of dysentery, which resisting all medication, became chronic, and a LARGE ULCER OF THE RECTUM DEVELOPED. I called in consultation a noted surgeon. The patient's condition was one of extreme emaciation; blood and mucus in large quantities were voided about an average of once an hour. The dose of opium had been increased to 3 dr. laudanum in twenty-four hours and $\frac{1}{2}$ gr. morphine twice a day, and still matters grew worse. We decided to inject solution 30 grs. to oz. nit. silver in rectum. The result was a COLLAPSE that nearly proved FATAL. Upon it being suggested later that the operation be repeated, the patient, a young man, said if we and his family insisted, to avoid it HE WOULD COMMIT SUICIDE. Dr. W. S. Armstrong was then called in with me. He suggested an exclusively milk diet, gradual reduction of opium, and ROCKBRIDGE (VA.) IRON AND ALUM WATER. Immediate improvement set in, and in TEN DAYS so great was THE CONSTIPATION that oil and enemas had to be resorted to to procure an evacuation from the bowels. Since that time I HAVE TREATED SEVERAL CASES EQUALLY AS BAD, WITH SAME HAPPY RESULT, using same diet and medicines, for of all agents for this disease, I consider THE ROCKBRIDGE ALUM AND IRON WATER THE FIRST. It is equally EFFICACIOUS in CHRONIC DIARRHŒA, AS MY RECORDS ATTEST."

DR. TODD, March 21, 1900, writes: I have for 16 years used these GRAND WATERS constantly in my practice with increased and increasing satisfaction. I inclose you article written 3 years ago on opium. "In chronic diarrhœa and dysentery, the milk diet, ROCKBRIDGE ALUM WATER, and small doses of opium given cautiously—very cautiously lest your patient acquire the opium habit—has proved so INVARIABLY SUCCESSFUL with me, that I have COME TO TREAT THESE CASES with a CONFIDENCE BORN OF SUCCESS."

DR. HUNTER MCGUIRE, Virginia's great surgeon, says: As an astringent and tonic it is one of the most valuable I have ever used.

DR. S. GAILLARD THOMAS, Professor College of Physicians and Surgeons, N. C.: Most efficient astringent and tonic waters I have ever employed.

Write JAMES A. FRAZIER, Mgr. Receiver, Rockbridge Alum Springs, for Pamphlet.

Dr. Banner.—Eye, Ear, Nose and Throat.

We have had a worthy addition to the medical fraternity of Charlotte in the coming of Dr. Banner of Mt. Airy.

He comes thoroughly furnished with every scientific equipment for the most modern treatment of all diseases of the eye, ear, nose and throat and behind his instruments will be found a man of rare ability and skill.

In no other department of medicine is there such sure returns for the right man as in this specialty and we hope that Dr. Banner will do great things for himself and the profession in his chosen field.

Militant Advocates of Vaccination.

A Christian Scientist lectured recently in Victoria, B. C., on the "Failure and Iniquity of Vaccination," and his remarks were so outrageously slanderous and false that they aroused the ire of the anti-faith-healers in the audience, and a general mêlée ensued. When order was finally restored most of the men present bore marks of the fight, and several of the "scientists" acquired a sudden "belief" in epistaxis.—*Medical Record.*

Dr. Edward Francis Brady, in an article entitled Epilepsy (Hospital and Clinical Reports), says: I do not approve of the Gowers plan of treatment. The dosage is too massive and I think unsafe. The danger from collapse is always to be feared, and if that is escaped bromism is almost certain to be produced. I think that the combination of all the bromides, the potassium, sodium, ammonium, calcium and lithium is the best form in which to use them, for that reason I always use Peacock's Bromides. This preparation contains the five bromides and is a safe, reliable and staple article, and by its use we escape the substitution of pharmacies.

When tendons of the fingers or toes have been severed, it is often necessary, in order to bring the ends together, to strongly flex or extend the joints, according to whether the flexor or extensor tendons have been injured, and this position should be maintained by the dressing after the suture has been done, in order to relieve any tension upon the severed ends. Passive motion should be made as soon as it is likely that union has well begun.—*International Journal of Surgery.*

The Saline Treatment of Dysentery.

W. J. Buchanan (British Medical Journal, Feb. 10, 1900) reports a series of 555 consecutive cases of dysentery with only six deaths. He gives a drachm of sodium sulphate three or four times a day. Purgation should be free but gentle, and when bright-yellow stools without a trace of blood or mucus are passed, then the drug should be stopped, but resumed at once if blood or mucus reappears in the stools. The writer says that he has usually found that after five or six stools are passed blood and mucus have disappeared, but in many cases they reappear in a day or so. In such cases sodium sulphate must again be given. In chronic and relapsing cases Dr. Buchanan says he has tried olive oil for some time, but gave it up as of no special value, and now treats these cases chiefly by dieting and patience. When first seen they are given sodium sulphate for one or at most two doses, and then bismuth and soda or other intestinal antiseptics. For every exacerbation—that is, for every return of blood and mucus—a dose of sodium sulphate is given, or if scybala are passed a dose of castor oil and laudanum. Intestinal worms are not infrequent in chronic cases, and when such are seen or expected santonin or male-fern should be given. The writer says he considers salines, except in the limited doses above mentioned, as harmful where there is ulceration of the great intestine. In ordinary cases the acute stage under this treatment is over by the third or fourth day, and if the stools remain free from the dysentery products, a tonic of iron or nux vomica should be given.—*Medical Age*.

Round Gastric Ulcer in Connection with Hysteria.

Gilles de la Tourette (La Semaine Med., Nov., 1899; Vrch, Vol. XX., No. 49) reports a case of gastric ulcer occurring in a young hysteric girl after a mental perturbation. He believes that hysteria is responsible for many cases of gastric ulcer in young women. The formation of the ulcer in his case he explains as follows: At first a hemorrhage in the gastric mucous membrane took place similar to the hemorrhages in the skin of the same patient. The mucous membrane became denuded by the first and subsequent hemorrhages and was acted upon by the gastric juice, which produced the ulceration. No changes in the composition of the gastric juice have been observed in these cases. In treating gastric ulcer in young women, it is therefore well to keep in mind the hysteric element.—*International Medical Magazine*.

A Case of Sinus.

G. W. Bodey, M. D., Kettlersville, Ohio, September 17, 1899: I used Echthol on a case of sinus extending from the inner and middle of the right thigh upward and outward nine and one-quarter inches in length. It had been operated upon in that locality twice, also once on the canal from the psoas abscess, its starting point. The sinus was lined with a tough pyogenic membrane, so that by inserting the index finger its full length occasioned no pain. The young man, twenty-two years old, would submit to no further operation. I inserted perforated rubber tube, one-half inch in diameter, nine inches, burned or destroyed the membrane with chloride of zinc solution, after which I used Echthol, filled the cavity completely full three times a day, by which the pus ceased to flow from the very beginning. I continued its use until I could not insert even a catheter. I applied a rubber bandage for five weeks, dismissed him then as cured; the period extended eight months. I used five bottles of Echthol. I dismissed the case in May last, and will wait to see further results, then I will try to write an article on that case and on two others on whom I used the medicine. My faith in Echthol is unlimited, and can only say the case above described, from a city of twenty-eight physicians, has increased my practice in that locality.—*Medical Brief*.

Resignation of Dr. Charles McBurney.

Dr. Charles McBurney has resigned his position as attending surgeon to the Roosevelt Hospital, and the announcement is received with great regret and considerable surprise by the profession. Dr. McBurney has been identified with Roosevelt during its entire existence, and it was on account of the high esteem felt for him that the Sims Operating Pavilion, one of the most completely equipped establishments of the kind in the world, and which was erected and fitted up under his personal supervision was added to the hospital.—*Boston Medical and Surgical Journal*.

If a patient suffering from urethral stricture has chills every time you pass an instrument, notwithstanding the fact that you are certain that your sounds are perfectly sterile, give up dilatation and cut. The patient will probably have another chill after the operation, but, as it is of nervous origin, in all probabilities, the danger is very slight, and the subsequent passing of sounds will commonly be accomplished without further trouble.—*International Journal of Surgery*.

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The word Listerine assures to the Medical Profession a non-poisonous antiseptic of well proven efficacy; uniform and definite in preparation, and having a wide field of usefulness.

On account of its absolute safety, Listerine is well adapted to internal use and to the treatment of Catarrhal Conditions of the mucous surfaces.

LITERATURE DESCRIBING THE BEST METHODS FOR USING

Listerine in the Treatment of Diseases of the Respiratory System

WILL BE MAILED TO YOUR ADDRESS, UPON APPLICATION.

We beg to announce that, in addition to the 14 oz. bottle, in which Listerine is offered to the trade, the pharmacist can now supply a smaller package, containing 3 fluid ounces, which is put up for the convenience of practitioners who prefer, upon certain occasions, to prescribe articles of established merit in the Original Package, under the seal and guarantee of the manufacturer.

FOR DISEASES OF THE URIC ACID DIATHESIS:

Lambert's Lithiated Hydrangea

RENAL ALTERATIVE--ANTILITHIC.

The ascertained value of Hydrangea in Calculous Complaints and Abnormal Conditions of the Kidneys, through the earlier reports of Drs. Atlee, Horsley, Monkur, Butler and others, and the well-known utility of Lithia in diseases of the uric acid diathesis, at once justified the therapeutic claims of LAMBERT'S LITHIATED HYDRANGEA when first announced to the medical profession, whilst subsequent use and close clinical observation has caused it to be regarded by physicians generally as a very valuable Kidney Alterative and Antilithic agent in the treatment of

Urinary Calculus, Gout, Rheumatism, Cystitis, Diabetes, Hematuria, Bright's Disease, Albuminuria, and Vesical Irritations Generally.

Realizing that in many of the diseases in which LAMBERT'S LITHIATED HYDRANGEA has been found to possess great therapeutic value, it is of the highest importance that suitable diet be employed, we have had prepared for the convenience of physicians,

DIETETIC NOTES.

suggesting the articles of food to be allowed or prohibited in several of these diseases. A book of these Dietetic Notes, each note perforated and convenient for the physician to detach and distribute to patients, supplied upon request, together with literature fully descriptive of LAMBERT'S LITHIATED HYDRANGEA.

LAMBERT PHARMACAL CO., ST. LOUIS.

Some Details as to Aseptic Operation

In speaking at the Leamington Medical Society on organization of aseptic operation, Mr. Lockwood described the measures which he had found to be most effectual for producing asepsis. For the disinfection of the skin of the patient steps need not be taken over night. All that is necessary can be done an hour or so before operation, and in the case of a lady or child may even be deferred until the patient is under the anæsthetic. The steps are as follows: (1) The skin is, if necessary, shaved; (2) it is thoroughly washed with soap and water; (3) as much as possible of the remaining fat is extracted with ether, or turpentine, or benzine, turpentine being probably the best; and (4) the skin is thoroughly saturated for not less than two minutes with a solution of biniodide of mercury (rendered soluble by the addition of potassium iodide) in methylated spirit (1 in 500). For the disinfection of the hands after the nails have been cut short and all outside dirt and grease removed, the solution of biniodide of mercury and methylated spirit is employed. Not less than half a pint of this fluid should be placed in a capacious sterilized bowl, and the disinfection should in many cases be made to extend to the wrists and forearms.

Should this process cause roughness of the skin during inclement weather a mixture of glycerine and eau de Cologne applied at night brings about a speedy cure. Instruments are boiled for 15 to 20 minutes in a solution of sodium carbonate (one drachm to the pint), and at the time of the operation lie in carbolic lotion (1 in 60). For sutures and ligatures fishing gut and one or two sizes is twisted silk are used. These may be sterilized by boiling for 20 minutes in water, and then placing them in a jar of 1 in 20 carbolic lotion for conveyance to the operation. Silk should not be boiled in soda, or it will be rendered brittle. Towels are sterilized by boiling for half an hour in a boiler or saucepan, after which they are transferred to 1 in 40 carbolic lotion. Sponges are beaten, and the shell and coral dissolved out with dilute hydrochloric acid, and then treated with washing soda; and, lastly, the sponge is disinfected and bleached by being submerged in a 1 in 5 solution of sulphurous acid in water. During the operation the sponges and the hands of the operator are constantly washed with biniodide of mercury lotion, 1 in 2,000. As small a number of sponges as possible is employed; often only one. Four round and one flat sponge should suffice for an abdominal operation.—*Hospital*.

Medical Courts of Honor in Prussia.

The institution of professional courts of honor is not a new one in Prussia. The army has its courts of honor and so has the legal profession, and on April 1st. the British Medical Journal says, "similar courts for the medical profession are to come into existence. The plan of organization is simple. In each district where there is an *Aerztekammer* (representative body of doctors) a court is to be established; it will consist of the president of that body, three of its members, and, in addition, a judge of one of the local courts. A central supreme court will act as court of appeal, and is to consist of (1) the director of the Prussian ministerial medical department, (2) four members of the central committee of the *Aerztekammer*, (3) two medical men specially elected by the king of Prussia. The courts are to exercise jurisdiction over all certified practitioners excepting medical officers of the army or navy and others for whom a state disciplinary board already exists. The scope of jurisdiction is defined by the new law as follows: 'Every medical man is bound to exercise his profession conscientiously, and by his behavior—both in his professional and in his private life—to show himself worthy of the respect which his profession demands. A medical practitioner who fails in the duties incumbent is subject to the infliction of a penalty by the court of honor. Political, scientific, and religious opinions or actions of a practitioner as such can never form the subject of proceedings in a court of honor.' The penalties which the court may inflict are: (1) warning; (2) reprimand; (3) fine, not exceeding 3,000 marks (£150); (4) temporary or permanent withdrawal of the right to elect members of the *Aerztekammer* or to be elected a member."—*Medical Record*.

Dr. A. Jacobi teaches that while during the early days of an infant, a cold or even cool bath should not be given, yet after a few months, by carefully graduating down the temperature of the water, a cool or cold bath can, and should, be used for infants, especially during the hot season. He believes that cold water bathing promotes a very strong and healthy resistance to diseases, especially the enervating diseases of hot weather.—*Clinical Record*,

There occurred on February 3 in St. Louis the death of a Christian science believer. The autopsy revealed the fact that death was the result of a strangulated hernia, and could have been prevented had medical aid been sought.—*Medical Age*.

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He was a grave, thoughtful man of marked intellectuality and fine literary tastes. She was a featherbrain of a soubrette. Most vivacious and winsome in her petite blonde loveliness, but in no sense a book worm.

"Are you fond of literature?" he inquired, with assumed carelessness, but he was watching her attentively.

"Passionately," she replied, "but I get so little time to read anything except the chronicles of my profession. Ours is a most exacting art, but I love books dearly."

"Then you must admire Sir Walter Scott," he exclaimed with sudden animation. "Is not his 'Lady of the Lake' exquisite in its flowing grace and poetic imagery? Is it not——"

"It is perfectly lovely," she assented, clasping her hands in ecstasy. "I suppose I have read it a dozen times."

"And Scott's 'Marmion,'" he continued, "with its rugged simplicity and marvelous descriptions. One can almost smell the heather on the heath while persuing its splendid pages."

"It is perfectly grand," she murmured. "And 'Scott's Emulsion,'" he continued hastily, for a faint suspicion was beginning to dawn upon him.

"I think," she interrupted rashly, "that it's the best thing he ever wrote."

The Aix-la-Chapelle Treatment of Syphilis.

At a recent meeting of the North London Medical and Chirurgical Society Mr. Albert Ehrmann, in commenting upon a case of syphilis, gave some interesting information in regard to the treatment of that disease by inunction, as carried out at Aix-la-Chapelle. The skin, he said, was generally considered to be in a fit condition for the absorption of mercury on the third or fourth day after the arrival of the patient. The dose used was at first from two to three grammes daily, and this might be increased to four or five grammes if the process was well borne. They did not generally go beyond the latter dose. The two legs were treated on the first day, the two thighs on the second, the chest and abdomen on the third, the back on the fourth, and both arms on the fifth day. The nipples, the navel, and the hairy parts of the body were easily induced in these parts by the applications. The material used was generally the ordinary grey mercurial ointment. The best time for inunction was thought to be the morning, but not until the skin had become dry from the bath. The presence of moisture in the skin was unfavorable to the absorption of the ointment. A daily bath, lasting half an hour or so, was taken, and every day several glasses of thermal water were drunk. After the twentieth day of the treatment a steam bath was given on alternate days, followed by an ordinary bath and a cold douche to prevent danger from chill. It was not very clear in what way the sulphurous waters acted, perhaps it was by warding off mercurial enteritis, or possibly by converting some of the mercury into an inactive sulphide.—*Hospital*.

A Professional Opinion.

In a recent letter to Micajah & Co., Warren Pa., Dr. George E. Gilpin, Berkely Springs, W. Va., says concerning their preparation: "After years of constant use of Micajah's Medicated Uterine Wafers, I feel constrained to add my testimony as to the very great value of the remedy in prolapsus uteri, congestion of the organ, vaginal discharges and kindred troubles. My experience in their use has been very extensive and I have long felt that I owed to you an expression of my appreciation of their merits."

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Fluid Extracts **thus prepared** are perfect representatives of the drugs from which they are made.

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Anemia in Dyspeptic Patients.

Dr. J. Weiss, of Vienna (Die Heilkunde, December, 1899) reports his results with various iron preparations in cases of anemia attended with gastric disorders, such as pains in the stomach after ingestion of food, and a feeling of fullness in the epigastrium. He has derived excellent results from the use of ferro-somatose in doses of three teaspoonfuls daily. In one of the cases of anemia reported, due to lead poisoning, the quantity of hemoglobin increased within a month from 30 to 70 per cent., while the increase in weight amounted to eight pounds. In another instance of chlorosis the increase of hemoglobin was 30 per cent. in six weeks, and in another case 40 per cent. during five weeks. A patient who suffered from severe anemia and emaciation during the puerperal state was completely restored to health in six weeks. In all these instances, ferro-somatose was well tolerated without producing the least gastric disturbances, and in this respect the author's observations are confirmatory of those of Roos, Werner, Panzer, Klein, and others.

Trophonine.

Extract from hospital records of cases treated by Trophonine medication at the Metropolitan Hospital Blackwells Island, N. Y.:

C. W., age 26, native of Ireland, occupation domestic.

Diagnosis: extreme anemia, following the puerperal fever (Incipient phthisis).

Family History: unknown, previous history nothing of any value obtainable.

Present History: About three months ago patient gave birth to a living child, her first pregnancy. After confinement was sick for two months with puerperal fever, now suffers from extreme pain in abdomen. Has a very vile vaginal discharge, abdomen very sensitive and tympanitic. Patient runs a typical hectic temperature, has severe night sweats. Has a constant and weakening diarrhoea.

Subjective Symptoms: Patient is very weak, unable to move, great pain in abdomen when moving. Short of breath on the least exertion.

Physical Examination: Pale, waxy, emaciated and covered with perspiration, general emaciation.

Circulation: Anaemic murmurs at every cardiac orifice. Bruit dediable heard with great distinctness in jugular veins. Size of heart normal. Has enteric involuntary diarrhoea.

Respiration: Dulness, both apices as far drow as the first rib on the right side and

second left. Bronchial breathing and an increased vocal fremitus. Crepitant rales heard at apices.

Genitourinary System on Nov. 2nd: Patient was placed before a clinic as an example of anaemia, the murmurs being so pronounced that the whole clinic was allowed to listen. Patient was unable to stand up during examination.

Treatment: Patient was placed on Trophonine, two tablespoonfuls every three hours, two tablets of Protonuclein every three hours. Her condition rapidly improved ran near normal, color began to come back to her cheeks and the patient's condition was so much improved that she was able to be up and about. The anaemic murmurs were less and less pronounced, and on Dec., 21st, patient was again brought before the clinic. Upon Examination murmurs were entirely absent. Patient is about doing light duties about the hospital. After six weeks is discharged from the hospital as cured.

Sanmetto in Chronic Orchitis.

J. A. Stothart, M. D., Savannah, Ga., reports the following case: "During Nov., 1898 a Greek fruit vender called at my office, suffering with chronic orchitis. The patient stated that the first attack occurred four years prior to this time. During the four years there had never been more than two and a half months between the attacks. He had been under treatment most of this time, and several times in the hospitals, and had been discharged as cured by several physicians. The testicle had almost arrived at the condition of ossification, but at no time had there been any pus formation. I prescribed Sanmetto, and directed that the treatment be continued for two or three months. My treatment was carried out to the letter, and there has never been any return of the trouble since the use of Sanmetto. I have used Sanmetto in other urethral troubles with very satisfactory results."

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Doctor—Did your teeth chatter when you had the chill?

Patient—No, they were on the table.



6

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Itch, Barber's Itch, Poisoning Ivy, Acne, Etc.**

Hydrozone, applied to any open diseased surface, destroys the pus leaving the tissues beneath in a healthy condition. Then **Glycozone**, being applied to the clean surface, stimulates healthy granulations and heals the sore.

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Physicians remitting 50 cents will receive one complimentary sample of each "Hydrozone" and Glycozone" by express, charges prepaid.

Hydrozone is put up only in extra small, small, medium, and large size bottles, bearing red label, white letters, gold and blue border with my signature.

Glycozone is put up only in 4-oz., 8-oz. and 16-oz. bottles, bearing a yellow label, white and black letters, red and blue border with my signature.

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Crowded Professions in Cuba.

The Cuban cabinet has decided to adopt the recommendations of Senoir Barreiro, secretary of public instruction, for the reorganization of the School of Engineers, in order that young men may be able to adopt some other profession than law and medicine, both of which are overcrowded. The Spaniards founded an engineering school, but when they found that the graduates were competing with Spanish engineers the school was neglected to such an extent that it became valueless. It will now be raised to a high standard of efficiency.—*Medical Record.*

E. N. Campbell, M. D., Good Hope, Ill., says: I have used Aletris Cordial in threatened miscarriage and find it one of the finest and most efficient preparations that it has been my privilege to prescribe. Aletris Cordial should be used more than it is, although it is largely prescribed, yet like its twin sister Celerina, is not prescribed often enough to prove its efficiency. Most all cases that these preparations are used in are of chronic type, and those that require patience to relieve; hence, if these two remedies are taken regularly and persistently, according to the case, they will satisfy all concerned.

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Our Special Offer Price as follows: 2-oz. switch 26-in. long, long stem, 65c; short stem, 90c; 2-oz. 22-in. long, short stem, \$1.25; 3-oz. 22-in. long, long stem, \$1.50; 3-oz. 24-in. long, short stem, \$2.25; 3¼-oz. 26-in. long, short stem, \$3.25. WE GUARANTEE

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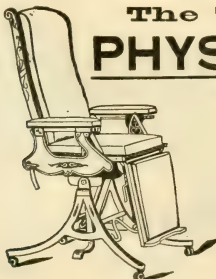
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Open Air for Babies.

Dr. Felix Oswald says, in answer to the question how old should infants be when first exposed to the open air and sunlight: I have often been asked at what age infants can first be safely exposed to the influence of the open air. My answer is, on the first warm, dry day. There is no reason why a new-born child should not sleep as soundly under the canopy of a garden tree on a pillow of sun-warmed hay as in the atmosphere of an ill-ventilated nursery. Thousands of sickly nurslings, pining away in the slums of our manufacturing town, might be saved by an occasional sun-bath. Aside from its warmth and chemical influence on vegetable oxygen, sunlight exercises upon certain organisms a vitalizing influence which

science has not yet quite explained, but whose effect is illustrated by the contrast between the weeds of a shabby grove and those of the sunlit fields, between the rank grass of a deep valley and the aromatic herbage of a mountain meadow, as well as by the peculiar wholesome appearance of a "sun-burned" person and a sun-ripened fruit. Sunlight is too cheap to become a fashioned remedy, but its hygiene influence can hardly be overated.—*Health and Home.*

In burns of the face, where the nose is badly affected, it is often a good idea to pass pieces of rubber drainage tubing up the nostrils in order to prevent closure during cicatrization.

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Bacterial Diseases in General.

By Geo. W. Pressly, M.D., Charlotte, N. C.

In these latter days we are able to trace the bacterial origin of the majority of diseases and to infer a like source in the remaining. Hence the general statement that in most diseases the bacterial infection is the disease.

A corollary follows, as a matter of course, that the treatment indicated is directly against the bacteria and their products. Treatment is prophylactic and curative and as in all diseases the former is vastly more important.

Bacteria are seed, and in regard to all seed, three things are worthy of consideration; first, the seed itself; second, the sower; third, the soil. In the first we have to do with the pathogenic or disease producing kind. In the second the conveyance or carriers without the body, and in the third the tissues of the human organism.

In the fight against bacteria, up to within a very recent time, too much stress has been laid upon the seed and the sower, too little upon the soil. It is impossible to destroy all the seed. In fact Hewlett tells us that with every inhalation in ordinary air we breathe in some 1,400 bacteria, in the large cities as many as 14,000 in a single breath. They are too many for us. The marvelous rapidity with which they multiply is appalling. To demonstrate measure the discharge from an ordinary attack of acute rhinitis and count the number in a cubic centimeter.

In the second place it is next to impossible to stop or even regulate their means of conveyance except in a few isolated cases. And so we must have bacteria, willing or unwilling.

But one drink does not mean an attack of delirium tremens and not every thousand bacteria means disease, hence the number of doctors who are never sick.

What becomes of the millions of micro-organisms that pass into our body?

Take inspired air for example, 10,000 germs may pass in with each inspiration, yet the expired air is comparatively sterile. There is nothing the matter with the seed or the sower, for they are carried down to

the very heart of the system. But the soil, it is barren and unfruitful, even destructive and so there is safety for us. Again consider the aseptic condition of the ordinary negro cook and the sterility of the everyday dishrag and who has time to tell us of what passes into our stomach. Yet we manage to live, in truth some of us get fat upon these same stall-fed bacteria. Again the seed are all right and the sower knows her business, but the soil instead of fructifying, blights with a withering death and so no harm comes to us. Let the soil become inviting or even tolerant and these things which yesterday passed harmlessly by, become to-day a destroying host that may carry by assault the very citadel of life. A slight catarrhal condition of the respiratory tract, some small change in the intestinal mucosa and that which was an iron wall becomes an open gate.

These conditions concern a man's everyday life, and if such things happen in the green tree, what of the dry?

Antitoxin is valuable in many diseases, germicides and antiseptics are invaluable in many ways and places, but they all have in view the seed or its products and leave undisturbed, or further injured, the all important soil.

It has been proven by experiment that it is impossible, by the most painstaking and thorough method, to absolutely sterilize the skin; at the site of proposed operation for instance. Is aseptic and antiseptic surgery a farce then? By no manner of means. Spend only ten minutes in reading the surgical history of 1860 to be forever convinced. But the germs which caused so much mischief in the trail of our forefather's knife were those that could be seen almost with the naked eye and which soap and water would have removed. In other words they were not clean in the ordinary meaning of the term.

It is not meant that we may discard the manner of cleaning the skin or mucous membrane and hands which the modern surgeons have taught us was necessary but rather with the most scrupulous care and delicate regard should we carry out the minutest detail. This is not so much on account of the seed, but because we deliberately and with aforethought prepare

the soil for the growth and development of the seed.

The skin is a barren desert, but the incision of the surgeon is a garden bed well sodded, warm and mellow.

But even if an impossible task we must try to destroy all the germs we can and, like the youth of our school-boy days, if at first we don't succeed, let us try, try again, because there is always somewhere a prepared soil that they may chance upon. It is also a plain, and in some respects, a practical duty, to limit and control in every possible way the method and means of infection. Yet this is only the mint, anise and cummin, the weightier matters of the law is the careful husbandry of the soil.

Any man in this free and easy land may have the tubercle bacilli in his every breath and the doctor who will prescribe some stereotyped cough syrup for even the simplest bronchial catarrh is as competent to practice medicine as the counter-prescribing druggist, not more so. Cough mixtures are good, are often indicated, but they have helped so many along the road to the consumptive's home and the strangling death. How many cases of improper feeding has pepsin and its combinations relieved until the typhoid bacilli gained an entrance through the diseased gland? A very small abrasion of the external skin may be the determining cause of infection as a prick in dissecting, as a mosquito bite in malaria, so may a little crevice of the internal skin, the mucous membrane, serve as the starting point of disease.

What shall we do then with our patients who have a slight cough or the heartburn after meals?

For the first it is better to send him to bed after washing his feet in hot water than to dose him up with sugar and opium in nauseous mixtures. For the latter give bread and water only for nine days together with a lecture on dietetics that he will remember and tell his great-grand children. We doctors can be so careless and indifferent at the beginning and so solemn and wise at the end. What has been said in regard to injuries in certain parts of the body may be truthfully said of all the conditions for the relief of which we are consulted, none are so trivial but that the outcome may be serious and none are so desperate but they may be helped by skill and sympathy.

12 South Caldwell.

"He told his audience that he was wholly unprepared." "Do you believe it?" "Yes, he had his speech in his pocket, but he hadn't learned it."

Hypertrophy of the Pharyngeal Tonsil.*

By Walter W. Duson, M. D., Asheville, N. C.

This condition, more commonly called Adenoid Vegetations, is a true Hypertrophy of that glandular structure in the vault of the pharynx known as Luschka's tonsil.

This tonsil, in its normal state, is found in the upper and posterior part of every pharynx and forms a soft cushion of *agglomerate* glands in no way obstructing the passage of the air current or interfering in any way with the functions of the pharynx.

The diseased condition of this structure was first described as early as 1860 by Czermack, who failed, however, to find out its clinical significance.

This subject was fully covered some years later in a report of 102 cases by Wilhelm Mayer of Copenhagen, whose report was so exhaustive that very little if anything, has been added since his paper was read.

This disease, although in some cases congenital, more often develops in early childhood as a sequel to some one of the exanthematous fevers, or to repeated attacks of inflammation due to colds.

The condition is oftener found in children with some tubercular family history, having a general tendency to enlarged lymphatic glands; but this is not by any means the rule, as the diseased tonsil is often found in stout, healthy children with not the slightest tubercular taint.

It is often accompanied by enlarged faucial tonsils, follicular pharyngitis or a hypertrophic condition of the turbinated bodies.

The disease often disappears altogether after puberty, but remains in quite a large percentage of cases well up into adult life.

Pathologically this hypertrophic condition is the same as an hypertrophy of the faucial tonsil, except that in the former there is a greater hyperplasia of lymph tissue, while in the latter the fibrous connective tissue predominates.

The division of the enlargement into lobules can in most instances be distinctly seen or felt; then again, the enlargement takes a more flattened form and can scarcely be differentiated from the pharyngeal membrane.

It consists, microscopically, of a covering of columnar ciliated epithelium, covering a myxomatous mucosa, crowded with lymph corpuscles, connected by light fibrous tissue.

In some cases the lobular condition is so pronounced that the lobules appear as

*Read before Buncombe County Medical Society, April, 2, 1900

polyps, seeming to have pedicles and hanging loose in the naso-pharyngeal space.

In cases where the growth is of a large size the condition is readily recognized by the facial expression of the patient, which is so characteristic as to enable an experienced eye to make a diagnosis while the patient is walking along the street.

The expression is due entirely to the interference with nasal respiration, thereby causing the patient to keep the mouth open for breathing purposes. This in itself is sufficient to cause the idiotic expression so often found.

Beside this, there is usually a broadening of the base of the nose, a narrowing of the nostrils and a flattened appearance of the cheeks, all due to the lack of development of the parts from interference with the nasal function.

The above symptoms are only found in cases where the growth is sufficiently large to almost entirely occlude the nasal passages.

Ordinarily the most prominent symptom, and the one we are called upon to relieve, is the excessive discharge of mucus and muco-pus from the enlarged tonsil, thereby keeping the pharyngeal wall continually bathed in this secretion and sometimes giving rise to quite a cough by the irritation of the pharynx and larynx.

The patient is constantly *hawking* and *clearing* the throat and seems to develop a fresh case of naso-pharyngitis upon the slightest exposure.

Unless the growth is very large the secretion rarely comes forward through the nostrils, but passes back over the pharyngeal wall and is either swallowed, as in the case of young children, or expectorated.

Another prominent symptom and a constant one, is the impairment of the voice. We are all familiar with this condition which occurs from the nose being stopped when we have taken cold,—the condition when an M, and N, can only be pronounced as eb and ed.

This symptom is found to some extent in all cases however slight, because the post nasal space is not a large one and the smallest infringement upon it will interfere with the sound waves, causing some impairment of them.

Another quite prominent symptom, and one that is far reaching in its results, is the involvement of the ears. This, to my mind, is the greatest danger point in adenoid disease.

Ear complications are so often found in some form that we may say it is the exception not to find them. The complications may vary from the slightest catarrhal condi-

tion of the internal ear, presenting almost no symptoms, to a violent purulent inflammation, accompanied with all the symptoms usually found in such conditions.

Authorities differ as to the reason why disease in the vault of the pharynx should so often be accompanied by diseases of the ear. Some claim that it is due to pressure on the eustachian orifice by the adenoid growths; others claim that the ear symptoms are due to the extension of the catarrhal inflammation from the pharynx into the eustachian tube.

Bosworth believes that the ear disease is not caused by either of the above conditions, but is due to the interference with renewal of air in the middle chamber caused by the nasal stenosis. This interference, by preventing the constant renewal of air causes a rarefaction of the air contained in the middle chamber and a consequent congestion.

It matters very little which of the above theories may be correct as it makes no difference whatever in the treatment of the case,—the first step in the treatment of the ear complication being in all cases to remove the enlarged tonsil.

When the growth is not of a very large size the patient may be able to breathe through the nose sufficiently during waking hours, but when night comes the mouth is opened, and most of these patients are mouth breathers during sleep.

In some few cases where there is no enlargement of the turbinated bodies and the nasal chambers are quite free, it is sometimes possible to see the diseased tonsil by anterior examination of the nose, but this is very seldom the case.

Except in the cases of very young children it is always possible to make the examination posteriorly by means of the rhinoscopic mirror. This shows to the practiced observer, the exact condition of the parts and the diseased tonsil, if any can readily be seen and examined. Instead of the round smooth pharyngeal vault, there are seen glistening protuberances of varying sizes, more or less filling the cavity and obstructing the view of the nasal septum and posterior nasal orifices.

In very young children, and in all cases where there is any doubt as to the diagnosis, an exploration of the pharyngeal vault can be made with the index finger. The proceeding appears to be rather a barbarous one and is attended with some danger to the physician's finger from the child's teeth, unless proper precautions are taken, but there is scarcely any pain attending it.

There are quite a number of other methods of diagnosing the condition ad-

vocated by different writers, but the rhinoscopic mirror and the finger, in my experience, have been sufficient means for all cases.

It is remarkable, in most cases, what good results follow the removal of these growths. It almost always has a beneficial action on all ear complications, the catarrhal condition of the nose and throat is relieved and the seemingly semi-idiotic expression gives place to a normal one. The latter improvement probably due to the ability to keep the mouth closed, more than anything else.

In treating this disease much time is wasted in the use of medicated sprays, vapors and douches; they only alleviate the symptoms to a more or less extent, but have no curative effect upon the diseased gland. A surgical operation for the entire removal of all the offending enlargement is indicated and, to my mind, the only proper course to pursue.

For this operation I prefer the use of Gottstein's curette as being simple, easy of manipulation and thorough in its results when properly handled. If, after the use of this instrument, there are a few points remaining, it has been my habit to remove them with the Lowenberg forceps which has a cutting edge. The above named instruments and a mouth gag are all that are necessary for their entire removal.

The tonsil can be removed by the use of caustic applications, such as nitrate of silver, chromic acid, or better still, the galvano-cautery, but the process is a slow and painful one.

Many operators have devised cutting instruments and snares for the removal of these growths, but I will not take up the Society's time by an enumeration or description of them.

My greatest objection to the snare is, that with it, only the pendulous growths can be removed, and the removal, even then, is not a thorough one.

As to the use of an anæsthetic for the operation, it has been my rule to suit the patient or the parent. In very young children and those who cannot be managed, and particularly where the faucial tonsils are to be removed also, I prefer the anæsthetic.

The patient is placed upon the operating table with the head hanging over the end so no blood can get into the larynx. In case the faucial tonsils are to be removed also, I always attend to them first, as, otherwise, the field is obscured by the blood resulting from the adenoid operation.

Or, the patient may be held by an assistant in such a way that his struggling will

amount to nothing and the operation performed in that way.

The index finger alone is often used for the removal of these growths, but this seems to me to be rather an un-surgical procedure. As a rule these is very little hemorrhage following this operation. In my experience there has never been a single case where any attention whatever was given to it.

Rarely there is an acute otitis following the operation. There is no after treatment needed for the operation itself other than an alkaline wash or spray. Usually the parts heal without any trouble, but I have sometimes seen the site of the operation covered with an exudation and some rise of temperature in consequence. When the operation has been thorough the diseased condition does not return.

This disease is not dangerous as far as the life of the patient is concerned, but when we take into consideration the damage done; whether it be facial expression, nasal disease, or, most common and far-reaching of all, a diseased condition of the ears we are justified in attaching great importance to it, and insisting that the general practitioner as well as the specialist be always on the alert for it, thereby saving himself much trouble and the patient much suffering by its timely removal.

DISCUSSION.

DR. PEARSON.—“The doctor has so thoroughly covered the ground that there seems very little left for me to say. There were two points that were not mentioned. One of them is asthma occurring from the presence of adenoid growths. I have had occasion to see two cases of asthma which were due to adenoid growths in the pharynx, and upon the removal of those growths the asthma was relieved. Second, the relation of adenoid growths to deaf-mutism. Almost all cases where the growths have existed for any length of time complicates the ear, as the doctor has said, and I believe Frankenburg has made this a subject of investigation, and says out of 158 inmates of the deaf-mute institute in Prague, he examined, there were 50% with these growths. So far as the treatment is concerned, I agree with the doctor fully that operative procedure should be established, rather than trying the sprays, and the curet is as a rule, I think, the best instrument to be used. The only cases where the snare would be applicable are those cases of fibrous growth, assuming more of the form of a polypus. These can sometimes be removed with the snare, then treat the base with chromic acid. I use the Bosworth snare, and then cauterize the base of the tumor. We get then a

slough that is easily thrown off. In the case I spoke of I did not have to give a general anæsthetic, but used cocaine as a local anæsthetic. I see that Bishop, in regard to anæsthesia, recommends bromide of ethyl. With this you have to operate very rapidly as it only produces complete anæsthesia, for about five minutes. The operation can be done in that length of time, however, by having proper assistance and having everything ready before starting, but I have used cocaine in some cases and have also used general anæsthesia. I think the doctor has gone over the ground in regard to treatment and complications so thoroughly that I have nothing further to say.

DR. BATTLE.—My experience has not been very large with aenoid, though I have perhaps had my share. I would like to ask the doctor if he has not seen those growths disappear without operation, especially when they follow something like scarlet fever and diseases of that character. It has been my experience that those growths sometimes disappear. Sometimes there is objection on the part of the parent to having an operation, and I have known them in the course of two or three weeks to grow smaller and in two or three instances have disappeared, so I take it they must have given no further trouble. I have a case now that is certainly much less. The mother objects very much to having anything done, and I have only in a tentative way kept the nasal passage clean, and the growth is going down. I have nothing special to add to the doctor's paper, because he covered the ground. A few years ago we knew very little of this. The general practitioner I am sure sees very little of it now.

DR. AMBLER.—The pharyngeal tonsil is simply one of a chain of lymphatic glands which encircles the whole pharynx, with the vault of the pharynx as the upper portion of the circle; this gland is liable to any such disease as any of this circle might develop. As Dr. Battle has stated, we do have an acute trouble of this gland, the same as we do in the tonsil or in those at the base of the tongue, but I do not believe that the paper was read with an idea of surgical interference where there is a temporary diseased condition of this gland. I think the Dr. was referring more especially to the chronic cases, where the disease had been present for months, or even years, and has resulted in the first place in nasal obstruction and in the second place change in expression of the face of the child. Writers have given this expression of the child the name of "Mayers' face, because it was he who first described this condition in a child who had advanced adenoid. The

child becomes idiotic looking. You see them on the street with the lower jaw dropped with a narrow nose, the face pinched and the cheeks sunken; the eyes half closed and the whole expression of the child one of almost complete idiotic expression as the Doctor stated. I agree with him, and as Dr. Battle stated, surgical interference is the only thing that is going to produce any good, and although the parents of the child are always opposed to an operation, at the same time it is so simple that their objection is not well taken. Many of the cases can be operated on in from one to two minutes. I believe we frequently have operated on cases without giving anæsthetics, where the whole case is over in one or two minutes. With the right kind of a curette it only takes a few strokes to thoroughly free the pharynx from these vegetations. I think this same condition is often overlooked in cutting the tonsils. A great majority of our little patients whom we operate on for enlarged faucial tonsils also have enlarged pharyngeal tonsils and if we attempt to overcome the obstruction to breathing, or the catarrhal condition by simply removing the faucial tonsils I think we are making a great mistake. I make it a rule to always examine the pharynx in our ordinary tonsils operations, and in a great many of those cases the worst symptoms which are present do not come from the faucial tonsils but from the pharyngeal tonsil: In regard to the application of chromic acid, I have used it, and have also used the galvano cautery, but I do not believe it is a good plan to follow it out as a rule. Operative interference is the only successful method of handling these cases. For the ordinary hypertrophy operation it is not even necessary to tie the palate forward. I would state that my experience has been that these cases do get well themselves. Take a child four or five, 6, 7, 8 or 9 years old, with a bad case of hypertrophy, if you let that child alone, when he gets 14 or 15 or 16 that hypertrophy will go down, but in the meantime the child has developed a condition he will have as long as he lives. He has developed trouble with the larynx on account of his mouth breathing, and the after effects of the disease itself are even worse than the disease, and for that reason I do not believe that in the chronic disease it is well to let it alone.

DR. S. W. BATTLE.—I asked the question simply to bring out some little discussion on the point of treatment. I did not mean to make any special claim that these cases should be left to themselves. On the contrary, I believe very strongly that operative procedure is the thing, but I wanted

to know the experience of the gentlemen present as to what would be the result in leaving the acute cases alone. All of us have had experience with children with very large tonsils which interfere with the breathing ever uow and again when they take cold, but in a few years they cease to have these out-breaks on taking cold. I believe the operative procedure is the only thing to do, and as far as the doing of it is concerned, I do not believe that anæsthesia is very often required. The operation is over in a minute, for it is only a matter of of scraping out the growth, and while the bleeding is very profuse for a few seconds it is soon over. I have never used chromic acid. With the ordinary thickening of mucous membrane there is nothing that acts so beautifully, but you never know quite how much tissue it is going to destroy. 50% solution once applied will go on with its work until you thoroughly wash it out with a spray. In making this application with chromic acid as soon as I have painted my surface and as speedily as I can I get my spray and wash out as much as possible, and in the next day or two you can see your slough, and in a few days they will blow it out of the nose. I have had quite a little experience with chromic acid. If you have 50% solution and take a fine camels hair pencil with the nose speculum properly adjusted, you can make an application to any point that you wish with a great deal of accuracy. You have to be very careful not to slather it all over the mucous membrane, but if you choose your point and paint it, and then with a moderate amount of haste gather up your spray and wash off, on examination next day you will see a whitish area where you have applied this chromic acid, and in two or three days the patient will blow the slough off, and it is really a most satisfactory way of getting at some of those enlargements, and where you have a moderate amount of hypertrophy I recommend it to your consideration.

DR. PEARSON.—In the case I had reference to there was a growth of the fibrous nature. There are two kinds of adenoid growths of this chain of glands. One is mucous or lymphoid and the other is fibrous. The growth I had reference to was one of the fibrous tissue, and that I snared off and then treated the base of this growth. I do not apply the chromic acid in the wall of the pharynx when there is a chain of enlarged glands or vegetations but when the area is limited you can apply your chromic acid after the removal of any fibrous growth where you could not in the mucous or lymphoid.

DR. CRAWFORD.—I have treated a great

many of cases of those chronic troubles in the nose. Where there is considerable hypertrophy I usually use chromic acid in combination with glycerine. I have never had any trouble. I then use either the Siler's tablets as a wash, and if I find it is not reduced I use chromic acid again, with the absorbent cotton and probe. The worst trouble I find is upon the margin of the palate. Along there is thickening, and sometimes that portion adjacent to the margin is the most troublesome difficulty that I have witnessed in those cases. I have not had luck with anything better than after using the chromic acid with the glycerine than using hot gargles of bicarbonate of soda and alum, used three or four times a day as a gargle. I have used also tincture of iodine with olive oil, equal portions, with the probe and absorbent cotton. If I have not had the success I desire I use a solution of nitrate of silver and to that I add glycerine, and have a curved instrument that I pass through the mouth and in that way, with frequent gargles, I have had reasonable success, but it is a very troublesome and unsatisfactory method any way you take it, because when this disease becomes chronic it is difficult to remove it. Another thing. You find that after retiring if your patient lies upon his back his mouth will gradually open and he will breathe through it, and it becomes dry and feverish, so I usually have them sleep upon the side, and if I cannot have that done satisfactorily I have a large roll of cotton rolled up to considerable bulk and put it around the body so they cannot lay upon it, and they lay on the side and breathe better, and hence the dryness and unpleasant breathing is not so great as it would be by laying on the back. I do believe in the chromic acid treatment with glycerine. I think it is a most excellent one.

DR. DUSON.—I have had no experience in the use of chromic acid in solution. I have always used it fused on the end of a probe, and I find it then difficult enough to manage. Unless the part to which it is applied is perfectly dry it has a tendency to run and to get over a larger amount of surface than you want it to. I have only used the curette, and have found it satisfactory I have never attempted to use any cautery. I have never yet found a growth so fibrous that a sharp curette would not cut through. If you remove it with a snare you will usually leave a base that has to be treated so why not do it all at once with the curette without going through two operations. They are not as a rule as fibrous as the faucial tonsils, because there is not so much friction to make them so. In regard to

what Dr. Battle said about the growth disappearing; it is a well known fact that if you examine the growth from time to time you will find different conditions at almost every examination. Very often upon examination particularly in acute cases the naso-pharyngeal space will be entirely blocked up. Then again the growth will be almost flattened. I think the proper thing to do is to curette. Of course there are times, as when the enlargement follows measles, when we should wait a few weeks to see what it will do, but if after waiting the tonsil is large enough to be seen I think it should be removed. I have always used chloroform, and I am prejudiced against everything else. I have never seen any bad results from it, particularly in children. I have used it a great deal and it has always been satisfactory. I have never had a recurrence that I know of. Very often in operating on these cases the curette is not put far enough forward, but if you are particular to feel around to be sure that no part of the gland remains in the space after the operation is performed I do not think you will have any.

Sanitary Supervision of Schools.*

By R. Percy Smith, M. D., Sunnybrook, Md.,
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It is a well known fact to many physicians, especially those who have devoted much attention to the subject, that many of the most distressing, painful and destructive maladies owe their origin or intensification at least to certain injurious influences of school life. School are, indeed, properly named in many instances the "hotbed for disease." It becomes a requisite thing to properly cope with the world that the mind should have a good system of intellectual training, but in doing so we should endeavor to avoid injury to bodily health. It therefore becomes our duty to carefully consider these matters, inquire what these injurious influences are, and, as far as possible, avoid, mitigate or remove them. It is not possible for the laity to realize fully these facts, unless our profession should call their attention to the subject, and it is a duty we owe them and the rising generation that many irreparable damages done during early childhood should be avoided by our counsel and advice. Authorities in school hygiene assert that badly constructed

school houses, defective ventilation and lighting, inefficient removal of the bodily excretions, or the obnoxious gases generated by their decomposition, improper school furniture and furnishing, such as seats, desks, books, &c., want of elementary knowledge of hygiene on the part of the teacher, overstudy, carelessness on the part of parents or attending physician, and many other causes too numerous to specify are responsible for a large number of serious diseases, among which I might mention the following as most frequent:

- 1st. Nearsightedness.
- 2nd. Pulmonary consumption.
- 3d. Spinal deformities.
- 4th. Nervous and digestive disturbances.
- 5th. Contagious diseases.

As to the first—nearsightedness—it is hardly necessary to argue to prove that it has increased enormously in the past few years. One has merely to look around them to see the large proportion of young persons compelled to wear glasses in order to use their visual organs to the best advantage. This is sufficient evidence to prove the assertion. There is also abundant evidence to prove that the increase is due to pernicious influences of certain unhygienic conditions to which many children are subjected in the schools. It cannot be argued that visual defect is a necessary accompaniment of school work, or that it cannot be avoided without giving up educating children or reducing their education to a minimum, for during the past few years in one of the large schools of Germany that recently was constructed on hygienic principles the reduction in the proportion for the same number of years previous was from 21 per cent. to 12 per cent. As the tendency to nearsightedness in hereditary and progressive, the same must come when the great majority of educated people will be nearsighted, unless some measures are adopted to check the increase. The principal causes of nearsightedness in schools may be summed up as follows:

- 1st. Improper shape and construction of the room.
- 2d. Improper construction of seats and desks.
- 3d. Bad lighting.
- 4th. The distance of the objects to be seen, for example, maps and blackboards, and their position with reference to the light.
- 5th. Type, paper and printing of school books.
- 6th. Length of time for study.

As to the shape of the room, it should be oblong, with windows in one side only; there should be no windows on the opposite

*Read at a public meeting of the Baltimore County Medical Association, Towson, Md.

side, for cross lights are better avoided. The area of the windows clear of sash frames should be not less than one tenth, and not more than one-fourth of the floor area of the room. The construction of school desks should be arranged parallel with one another, but at right angles from the windows, and scholars should sit with the left hand nearest the windows, so the illumination of books and lessons will be from the left front. A line dropped from the near edge of the desk should strike the front edge of the seat, so the pupil may sit erect while writing or reading from a book resting on the desk. For lighting the room, the windows should reach as high as the ceiling of the room and open directly into the external air. The side of the room from which light enters should face the north in order to avoid direct sunlight. The distance of maps and blackboards should not be over 30 feet, for attempts to accommodate the eye at a greater distance will cause a muscular strain and induce a gradual elongation of the antero-posterior axis of the eyeball with the production of myopia. The books should be of clean paper and not translucent, and type of print for young children should be pica, and older children small pica. The length of study for young children should be broken by frequent intervals for play, and two writing lessons should never follow each other. I might add in reference to construction of desks that the height of the seat from the floor should equal the length of the scholar's leg from the sole of the foot to the knee. The depth of seat from front to back should not be less than 8 inches; the seat provided with a straight back, and a covered pad or cushion to fit into and support the small of the back and loins.

2d. Pulmonary consumption. As pulmonary tuberculosis is now known to be highly contagious, there is no doubt that seeds of this fatal disease are often implanted in the youthful system during school life. The causes of this disease are now recognized to be two—*exciting* or direct cause being the germ (bacillus tuberculosis), and *predisposing* or indirect causes such as badly-lighted and ventilated rooms, a necessary improper position of the body, interfering with full expansion of the chest; unsanitary surroundings and heredity. We can readily see how school rooms favor the development then of this disease when we remember that the chief mode of dissemination is from the sputum of consumptives (which always contains the specific micro-organism) being allowed to dry and become ground into dust is inhaled by those in the same room. Suppose then a child is attend-

ing school already suffering from consumption; he expectorates probably on the floor; the sputum is soon dried, and all other children who, predisposed to the disease, are immediately subjected to that which they are least able to repulse. It becomes then of utmost importance that attention should be paid to the removal of such conditions.

3d. Spinal meningitis. Five-sixths of the cases of spinal disease and deformity being during the years of school life. The disease is over ten times as frequent in girls as in boys. Improperly constructed seats and an almost necessary consequent bad position of the body are responsible for the greater number of these cases. Defective lighting has often a decided influence in producing this disease by compelling the pupil to assume an improper position.

4th. Nervous and digestive derangements. These disorders which frequently begin during school life often persist through life rendering the individual a chronic invalid. They are often the result of defective ventilation, over-heating or excessive mental strain. Prof. Bystroff says that persistent headache in school children is largely due to excessive mental strain, and leaving out of consideration the peculiarities of the child's nature and the elementary principles of hygiene. He adds in view of this fact the appeal of a recent French writer "a little more muscle, a little less brain," seems justified.

5th. Contagious diseases. There is no doubt whatever that schools are the most frequent sources of the extension of contagious diseases. Smallpox, scarlet fever, diphtheria, mumps, measles, whooping-cough—in fact, all the air-borne diseases are spread often through schools than any other-wise. Epidemics of these diseases increase remarkably during school season, and decrease when schools are closed. Suspension of schools has ended an epidemic that could not be controlled otherwise. The unrestricted manner in which children from an infected house attend school gives the freest possible chance for the spread of these maladies. School Boards require a certificate of vaccination from children before admitting them to school, but all of us know of many instances where children are vaccinated and given a certificate at once, without waiting to see whether it proved effectual or not. The blame of course should not rest upon the school officials, but upon the physician who gives the permit. May not one of these children come from an infected house, and so spread small-pox to others of like class in the school? Many physicians are criminally careless about giving such permits that may be the cause of an outbreak

of this disease, amounting to an epidemic. The question then confronts us—in what manner may these many evils be removed, or at least abated?

First, by securing proper construction, ventilation, heating, lighting and furnishing of school houses; then watching over the health of the pupils from the time of their admission to their graduation, correcting habits that may be injurious to health, and preventing by appropriate measures in conjunction with teachers, parents and health authorities, the spread of contagious or infectious diseases.

There seems a tendency among some physicians to sneer at the knowledge of of many Boards of School Commissioners in their attempts to prevent the spread of communicable disease, which seems unjust to these gentlemen, for while their attempts in many instances are feeble, they are usually the best their knowledge possess, and until their attention is called to better methods by the medical profession we should not expect them to be aware that more effectual methods exist.

The only successful mode to accomplish the necessary measures I have indicated is by the employment of an expert official appointed by the Board of School Commissioners and subject to their authority. Such an official might be designated as "Sanitary Supervisor of schools." Such duties could only be properly performed by an educated physician who has given especial attention to hygienic questions, both in their general and special applications. The duties of such an official should be to examine all plans for new school buildings before construction, all school houses before acceptance, and school buildings now in use, and suggest to the Board such changes as will make them more appropriate from a hygienic point of view. He should examine all new pupils applying for admission to determine whether they are properly vaccinated; vaccinate all who need it; keep watch over the course of instruction and see that no children are overburdened in their daily tasks; receive due notification through the teacher or health department of any contagious disease among school children, or in any house from which children are attending school. He should be able to give expert opinion upon paper, type and print of books before they are adopted. He should give instructions by lectures or otherwise to teachers upon the principles and practice of school hygiene, under such regulations as the Board may adopt. He should visit every school in the county at least four times a year and make such suggestions for sanitary improvements as appear necessary.

He should test the eyes of all school children at least once a year, and keep as accurate record of such tests. He should report annually in writing to the Board of School Commissioners upon the work performed during the year. Special reports may be required of him at any time upon questions coming within his duty, and he might at times aid the Board with advice and suggestion. It is obvious that political services would not necessarily qualify a man for these duties; and the appointment should not be contingent upon political views or activity, but upon his merits as a student of hygiene. The fact is, a Sanitary Supervisor of Schools requires knowledge of a special character, which the general practicing physician rarely possesses, be he ever so competent or successful in his own field. The additional expense to a county or city to employ such a man would be small when we consider the fact he would be school vaccine physician; and, moreover, any money expended in the betterment of the physical and mental condition of the young of our land will return profit a hundred times over.

I am inclined to believe the reason so little attention is paid to the subject of school hygiene by school authorities generally is owing to the indefinite manner in which these subjects are often presented to those bodies. Some sanitarians seems to think that mere assertion is all sufficient and will carry conviction. This is a mistake. Facts must be collected and arranged in such a manner that their significance can not be otherwise than in their true relations, and it will then not be difficult usually to convince intelligent public men of their importance and of the duty they owe their children.

I sincerely trust the members of this Association are alive to the necessity of school reform which I have advocated. I would suggest that any movement to secure the results, whether by legislation or otherwise, will be time well spent, and in years to come this society will have the pleasure of recalling the fact as being the first in this State to reform school administration.

Mitosis, or Regeneration of the Endometrium.

By Byron Robinson, B. S., M. D., Chicago.

Mitosis indicates the star-like division of the chromatin. It (Karyo Kinesis) is the process of indirect cell or nucleus division. (a) from the chromatin is formed the wreath, rosette or spirem, followed by the

aster or star-shaped body. (b) then pithos or barrel shaped body is followed by the diaster or double star. (c) subsequently the protoplasm separates into two parts, each of which the chromatin arranges itself into a cell, the whole called the dispirem.

Two daughter nuclei are thus formed from one mother nucleus. In mitosis epithelial cells originate epithelial cells, stroma cells, stroma cells and endothelial cells originate endothelial cells; in other words, elements always originate their kind. (a) In menstruation fragments of surface and glandular epithelia of the endometrium, as well as stroma tissue are destroyed expelled.



Fig. 1 (Kiefer) represents the gonococcus and short rod like bacilli in subacute gonorrhœa, a, a, a, gonococcus, b, double short rod bacillus, c, long rods, d, diplococcus flavus.

Mitosis repairs it. (b) In parturition, the superficial zone of the endometrium, i. e., the compact cellular layer of parallel glands are expelled with the foetal and maternal parts, mitosis restores it. (c) In traumatic abrasion of the endometrium, as in curettage and cauterization, large areas of the superficial epithelia are fragmented and expelled. Mitosis regenerates it. (d) In endometritis glandularis or inter-glandularis the elements as 1, superficial and glandular epithelia; 2, endothelia, and 3 stroma cells multiply or proliferate.

Mitosis, perhaps, produces the excessive cell proliferation. In other words, mitosis or excessive cell proliferation or regeneration is pathologic. It is the field of hyperplasia. The rich mitosis in restoring or repairing elements of the endometrium is a suggestive study—both as to ætology, prognosis, and surgical intervention. It requires much time and vast material. The last of which fortunately the service of Dr. Lucy Waite and myself, at the Mary

Thompson Hospital, furnished a wide range.

The regeneration of the endometrium, as all investigators announce, is very rapid



Fig. 10.

Fig. 2 (J. A. Amann). Longitudinal section through uterus and vagina of foetus in second half of pregnancy. Dr, beginning of depressions for (cervical) glands. Pp, pp, enormous branched papillæ in region of portio vaginalis, c, cylindrical epithelia in cervix, Pl, flat epithelia, T, cross section of uterine end of oviduct, G, vascular zone of uterus. Observe there are no depressions for corporeal uterine glands.

and vigorous. In the excellent labors of Dr. Amann, to whom I am indebted for excellent cuts, are found many suggestive views. Immediately after menstruation, which is chiefly a passive process of the endometrium, after parturition or traumatic abrasion, rich mitosis may be observed in the restoring elements of the endometrium. The four elements of the endometrium, viz.: 1, epithelia of the utricular glands, 2, epithelia of the free endometrial surface, 3, endothelia of the endometrium, and 4, the stroma cells will be considered during mitosis.

THE EPITHELIA OF THE UTRICULAR GLANDS

This regeneration, showing a rich mito-

sis, is required after parturition and curettage. The division axis is parallel to the fixed cell base. The newly formed epithelia cells moves rapidly toward the free surface and covers the surface of the connective tissue between the glandular remnants.

The newly formed cylindrical epithelia is apparently shorter than the original.

Amann states that in his vast material secured in the great clinic of Von Winckel he never saw the utricular glands closed at the free surface by excessive proliferation,

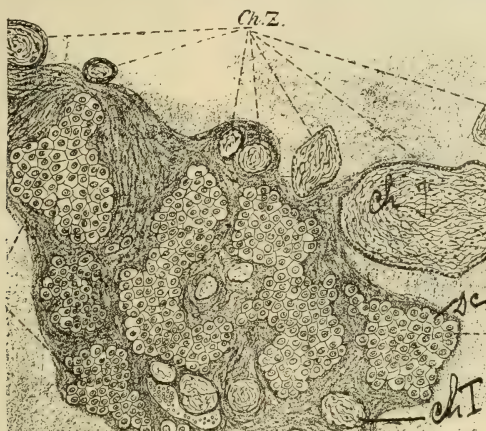


Fig. 3 (J. A. Amann). Fragment of tissue removed from the uterus by the curette a long time subsequent to an abortion. Dc, decidual cells, and Chz, chorion cells where blood and fibre masses are separated from each other.

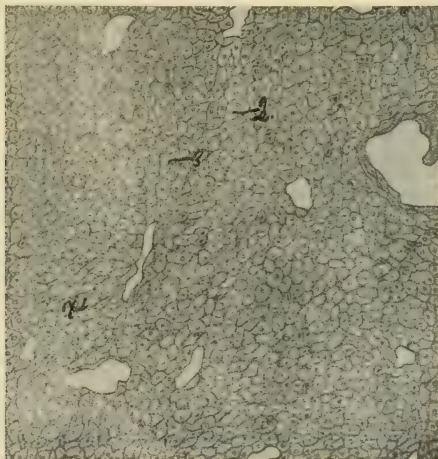


Fig. 4 (J. A. Amann). Decidual uterine in extra uterine gestation, expelled spontaneously some days after Dr. Amann had removed per abdomen a 7 month living child. The clearly retained decidual cells enclose no utricular glands, only vessels. 2, 3 and 4 indicate the different sizes of the decidual cells.

mitosis, of epithelia. It is a pathologic fact that the adjacent stroma may by compression obstruct the mouth of the utricular gland, inducing dilatation. However, this does not make the mouth of the utricular gland a solid strand of epithelia by excessive proliferation. In vigorous glandular epithelial cell proliferation the deficiency of adjacent stroma, and, perhaps, this is the method by which a single utricular gland acquires two myometrical or fundal branches and irregular forms, all opening by one mouth.

The free surface epithelia of the endometrium is regenerated by mitosis from the remnants of the glandular and surface epithelia. This regeneration mitosis is especially required after menstruation, curettage, and parturition. The mitosis of the surface epithelia of the endometrium is more irregular than that of the utricular glands epithelia. It shows diasters, regeneration mitosis, multipolar mitosis, giant mitosis, with viculae or perhaps degenerate forma-

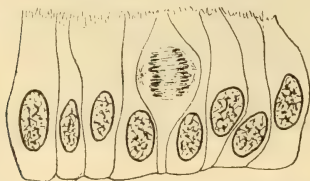


Fig. 5 (J. A. Amann) represents the regular method of epithelial proliferation, mitosis, in the glandular epithelium of the uterus. In benign proliferation the surface area, as a single layer only increases. One of the epithelia represents a diaster (double star) which lies parallel to the base of the epithelial cell. The mitotic nucleus is larger and forced to a higher level than the nuclei of the resting epithelia. This is the form of mitosis that represents the method in which the glandular epithelia is regenerated.

tion in the surface epithelia. The strange irregularity in mitosis observed in the surface epithelia of the endometrium may be due to the non-resistance offered to the growing cells in the direction of the free surface. In any natural process of the endometrium, which possesses the widest limits of variation of any mucosa, as parturition or menstruation, or even the artificial process of curettage there is always some surface epithelia left intact, around and from the intact remnants of epithelia of the utricular glands and surface epithelia the new epithelia is formed by the mitotic process, as noted by Amann. In the endo-

metrium new formed glands by invagination of the surface epithelia either in regeneration or hyperplasia is not probable. This assertion should not be confounded with erosion of the portio vaginalis uteri as that has relation with the flat epithelia of the vagina.



Fig. 6 (J. A. Amann) represents typically the glands of the cervical endometrium. Cdr, acinous cervical glands. Note how irregular the gland wall and how small the mouth. The secretion of large amounts of mucus which may dry, become inspissated toward the mouth explains why obstruction so frequently occurs at the mouth, producing dilatation of the glands—follicles of Naboth.

The stroma cells of the endometrium are regenerated from existing remnants by mitosis. They present a rich mitosis scattered here and there among the cells. In some cases the mitosis cells are forced partially from the adjacent cells by collections of fluid. The endometrial stroma cells require regeneration slightly after menstruation, but especially after parturition and curettage.

The endothelia of the blood and lymph vessels in the endometrium regenerate by mitosis. The mitotic cells project toward the lumen of vessel. It appears that the endothelia mitosis progresses independent of the stroma or epithelial cells of the endometrium. Endothelial mitosis is required in curettage, but especially subsequent to menstruation and parturition. Histogenetically no differentiation can be made between the regeneration of the elements of the endometrium and hyperplasia of the

same. Hyperplasia of endometrial elements is perhaps excessive regeneration only.

Hyperplasia of the endometrium refers to a proliferation or the excessive formation of new elements. It affects (a) the



Fig. 7 (J. A. Amann). Erosion during healing, a, flat epithelia which has grown over the glands and depressions, b, cylindrical epithelia, c, c, proliferated glands and cylindrical epithelial gland like cavities, d, infiltration of leucocytes, e, utricular glands, o, glandular cystic dilatation (Ovulum Nabothi).

glandular epithelia; (b) the surface epithelia; (c) the stroma cells; (d) the endothelial cells; (e) lymph cells. Doubtless the hyperplasia may affect part or all of the elements. The hyperplasia may not be induced by mitosis, but by chemical products, bacterial products, malassimilation due to circulation disturbance, dislocations and disturbed pelvic mechanism, distant reflexes, etc. No mucosa possesses such a wide range of physiology (function) or anatomy (structure) as the endometrium. Extensive regeneration is required for the profound passive changes at each menstruation and parturition. Besides at each of these frequent occurring processes of menstruation and parturition the endometrium is subject to inflammatory invasions. Also, however, it may be noted that it is just in the endometrium where hyperplasia is frequent.

(a) The hyperplasia of the epithelia of the utricular glands is peculiar in that it produces a variety of strange forms as



Fig. 8 (J. A. Amann). Erosion during healing. Observe the advancing of the flat epithelia through mitosis, and the forcing upward of the cervical cylindrical epithelia. Pl, flat epithelia advancing through a rich mitosis and undermining and pushing aside the cervical cylindrical epithelia. The flat epithelia in its native ground (the portio vaginalis uteri) is making a fight for existence by attempting to recover the field now occupied by displaced cylindrical epithelia, with flat native epithelia.

spiral, saw-shaped, invaginations and other irregular forms. This is due to the fact that the proliferating glandular epithelia always produces an increase in flat surfaces. In mitosis of the epithelia the division axis of the cell stands parallel to the base of the cell, so that two daughter epithelial cells exist side by side, each possessing a basic or fixed end, and a free or secreting end. In the mitotic epithelial cell the nucleus is large, requiring more space than the resisting cell, hence it projects above the level of the secondary epithelial cells or into the gland lumen. If the mitosis or epithelial cell proliferation be active the nuclei of the epithelial cells may not stand in a level plain because the nuclei of the proliferating or mitotic cell being large force themselves out of the regular even plain. Yet the epithelial cell always possesses a fixed, basal end, and a free secreting end.

Recall that the endometrial glands consist

of two distinct zones or layers, viz.: a superficial zone of straight and parallel glands in which mitosis is abundant and active, also a sinuous zone or fundal layer of glands in which mitosis is passive or very slight.



Fig. 9 (J. A. Amann). The corporeal endometrium showing the zone of straight glands za, and the zone of sinuous glands zb. The zone of regular straight parallel tubular glands (za) is the locality of active mitosis, it is the location where the regenerating proliferating glandular epithelia invaginates toward the myometrial or sinuous gland zone, it is the locality which becomes the compact cellular layer during gestation, and it is the zone which is expelled at parturition.

The zone of irregular, sinuous glands (zb) is the locality of inactive mitosis, it is the region of dilated and branched glands, it is the territory where epithelia folding occurs on account of space, it is the cellular layer of gestation, it is not expelled at parturition, but remains to regenerate new utricular glands and the zone of cystic dilatation.

In other words, the surface zone of straight glands is the region of active mitosis, proliferation, while the fundal zone of sinuous glands are the territory of non-proliferation, passive mitosis. In glandular hyperplasia the utricular glands are elongated, and when considerably elongated the glands shifts always toward the large and fundal lumen, i. e., in the direction of the least resistance and when in its course the gland meets with

no regular resistance it assumes various forms.



Fig. 10 (J. A. Amann). Hyperplasia glandularis. The glands are elongated sinuous and spiral, and on section appear serrated or saw-toothed. The glands are, perhaps, not increased in number, i. e., they are not new glands, but the gland epithelia is proliferated, multiplied and hence occurs the epithelial folding, the invaginations and corkscrew spiral form. The spiral form is assumed when the epithelia of the gland is generally proliferated, multiplied and the adjacent stroma offers uniform resistance. The utricular glands penetrate the myometrium.

Glandular invagination is of special interest, since in microscopical sections strange forms appear. For example, in certain cross sections several consecutive glandular lumina may be observed, or one large gland lumen with several irregular shaped lumina near each other.

Glandular invaginations arise by the following methods: (a) In the great elongation of the growing gland where it meets with an obstruction along the wall the epithelia begins to fold, to invaginate toward the glandular lumen, and like an intestinal invagination, the smaller lumen projects or invaginates into the larger. A section of such an invagination gland shows three concentric rings, or three gland lumina.

Of the concentric circular glandular lumina the inner is usually intact, the middle may be intact, but is frequently ruptured, when one sees only two concentric circular layers. It is the outer or external layer

which presents distension and consequently flattened epithelia which may be flattened to such a degree as to be mistaken for endothelia. Whether the section of the inva-

internal layers lie in contact applied to each other. Hence, the location of the nucleus diagnosis the layers in glandular invaginations. The subject of glandular invagina-



Fig. 11 (J. A. Amann). Glandular hyperplasia. Longitudinal section of a utricular gland in active epithelia regeneration or mitosis. The mitotic cells move toward the gland lumen, the locality of the least resistance. Diaster on the right. On the left two skeins from mitotic cell. Two dotted lines point to two leucocytes which wandered through the epithelial layer. Four leucocytes lie in the gland lumen. The nuclei lie so close to the epithelial base that it appears like a cervical gland. Observe the large oval and round nuclei of the stroma cells of the endometrium which surround the utricular gland.

ginated gland be made transverse, oblique, or longitudinal, it will present its individual peculiarities. The microscopist must orientate himself by the location of the nucleus of the utricular gland epithelia. Remember the nucleus of the epithelial cell in the cervix is at the base, while the nucleus of the corporeal epithelial cell is in the middle. In cross sections of a single invaginated gland the nucleus will be located basalward in the external layer. In the middle layer it will also be basalward, but exactly in the opposite location to the external gland layer as the secreting surface of the external and middle layer will be in contact, applied to each other. The nucleus of the internal layer will be basalward but opposite to that of the middle layer.

(d) The free or secreting surface of the internal layer projects toward the glandular lumen, while the free or secreting surface of the middle layer projects toward the wall of the gland—external layer. The basal or fixed ends of the epithelia of the middle and

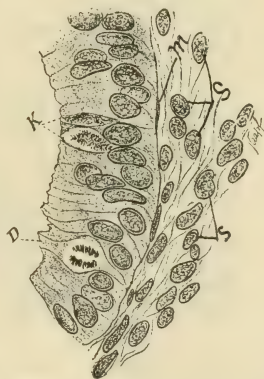


Fig. 12 (J. A. Amann). Glandular hyperplasia. Mitosis or regeneration of the glandular epithelia, D, diaster, K, skein for mitotic cell, S, nuclei of interglandular

cells, M, spindle shaped connective tissue cell forming basement membrane of utricular gland. Observe that the nuclei of the epithelial cells are not all on the same level.

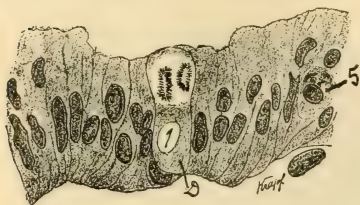
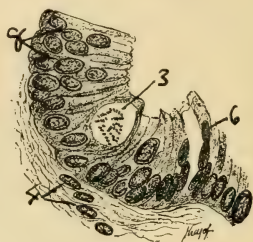


Fig. 13 (J. A. Amann). The cut to the left represents a diaster in the proliferating glandular epithelium. I, perhaps, is a vacuole, D, diaster. Observe that the diaster assumes, with its nuclei, a position above the level of the nuclei of the epithelium; 5, an epithelial cell and its nucleus shows that pressure forces the cell body to assume an oval shape and the nucleus to present a round shape. Adjacent forces shape the soft epithelial cell body and its nucleus as the adjacent abdominal organs mould the liver. The glandular hyperplasia is also observed.

The cut to the right, which represents an oligocene mitosis, (i. e., a few homogeneous threads or intermediate stages) in the glandular epithelium; 3, points to the mitotic cell which is so large that it is forced to the softer and more yielding portions of the

epithelium; 6 and 8 note the different levels which are assumed by the nuclei of the epithelial cells. At 6 it appears that the nuclei are poled one on the other.



tions is beautifully and typically illustrated in sections of proliferating glandular endometritis, or glandular hyperplasia, during the pre-menstrual or intra-menstrual phases. With structures intact an invaginated gland represents three concentric circular glandular lumina, but not infrequently the middle layer becomes ruptured during invagination whence one glandular layer glides into the other like a stove pipe. The nuclei are basalward and the basal ends of the nuclei layer of the epithelium rest on the secreting surface of the external layer. With ruptured middle epithelial layer the section appears as only two circular concentric epithelial layers.

(b) In the fundal or basal end of a gland which rests on or in the myometrium there

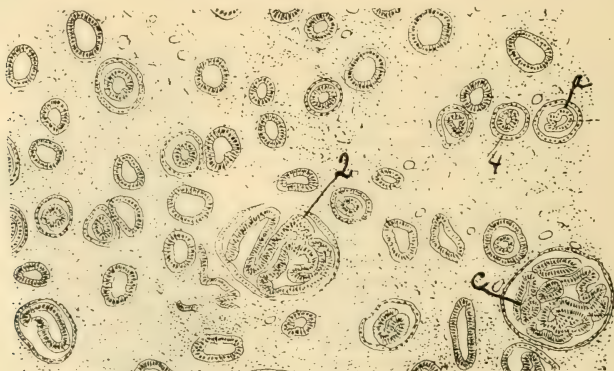


Fig. 14 (J. A. Amann). Glandular hyperplasia, especially representing glandular invaginations, a, 4, and other points where two concentric circular gland lumina are noted, observe that in several places where one gland lumen lies inside of the other, that the epithelia composing the external gland lumen are short cylinders, pressure and stretching has flattened them out. At b, the left hand edge 3 glandular epithelium layers may be observed. C and 2 shows a large circumscribed area with irregular

glandular epithelial invaginations and foldings. Numerous round or oval clear openings may be observed which represents vessels. This cut represents glandular hyperplasia, i. e., the utricular glands are not increased in number, but they are increased in size (hypertrophy). Note that the glands are not uniformly distributed. The reason of the non-uniform distribution of utricular glands is the inter-glandular stroma is also hypertrophic; the stroma cells are increased in number, proliferated to such a degree that the glands are forced out irregularly according to the adjacent stroma resistance which account for the glandular invagination. If the stroma was uniformly resistant these glands would assume a spiral arrangement. Hence, this cut represents hyperplasia diffusa. The gland adjacent to 2. is ruptured.

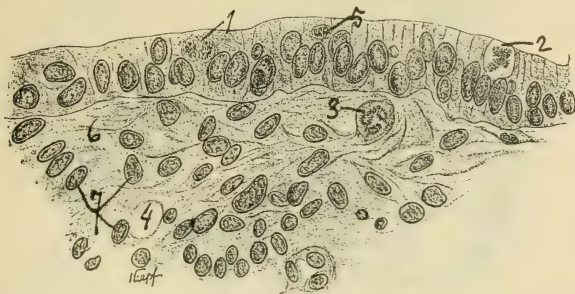


Fig. 15 (J. A. Amann). Multipolar mitosis in surface epithelia. Also multipolar mitosis in the inter-glandular stroma cells. It is benign hyperplasia diffusa. 1, 2 and 5, multipolar mitosis in the endothelial stroma cells; 6, body of stroma cells; 4, vacuole. Observe that the nuclei of endometrial stroma cells are forced wide asunder on account of inter cellular lymph fluid. It is perhaps odematous, as shown by the active mitosis and the distance between the nuclei. Note the definite outline of the surface epithelia and the fairly definite position of the nuclei in the epithelia. No cilia are represented, as it is generally desquamated in hardened specimens.

projects a tit-like process and it gives the myometrial end of the gland a branched appearance when the gland becomes hyperplastic or proliferates it meets the local points of opposition and folds its epithelial wall here and there, the tit-like projection in the fundus becomes a point for increased folding toward the lumen. On sections near the base of such a gland it will present two consecutive circular epithelial layers, however, with the secreting surfaces applied to each other and the nuclei in opposite directions. In this form of basal glandular invagination the gland may become dilated like the ampulla of the oviduct and the continued pressure of secreting contents produce additional invagination or foldings of the epithelial layer presenting more and more glandular epithelia lumina on section.

(c) The lateral walls of the epithelia layers of the gland may present papillæ like projections toward the gland lumen. The regular papillary formed projections of the epithelial layer in the lumen of the gland are liable to be formed at local points of dilatation of the whole gland lumen. The irregular resistance offered by the stromal wall accounts for the papillary invagina-



Fig. 16 (J. A. Amann). Disaster in surface epithelia. It is parallel to the base of the epithelia. 1, Disaster, 2, nucleus of interglandular stroma cell, 3, the proto-

plasmic body of stroma cell. Observe that the nuclei of the surface epithelia and those of the interglandular stroma cell resemble each other in size, shape, and relative position.

tions of the epithelial layer of the gland depends whether the invaginations begin:

(a) in the zone of the straight glands and proceed to the myometrial end; (b) or begin in the myometrial end, the zone of sinuous glands and proceed toward the free surface of the endometrium, or (c) whether the glands be invaginated from the lateral wall by inter-glandular papillæ. In other

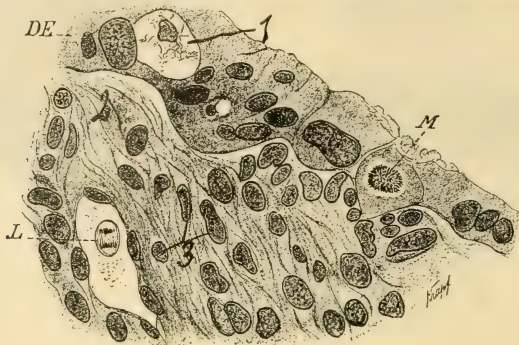


Fig. 17 (J. A. Amann). Irregular change in the surface epithelia (DE) Pre-metaplastic stage; e, skein in a cross section of a vessel; L, lymphocyte (disaster) in mitosis, dividing in the inter-glandular endothelial cells; 1, giant skein from cell proliferation perhaps in a pre-carcinomatous stage. The mitosis of the surface epithelia is suspicious. 3, points to three nuclei of the endometrial stroma cells; 2, the proto-plasmic body of the stroma cell. The nuclei of the surface epithelia are not only irregular in size, shape and distribution, but those of the stroma cells are still more similarly atypical. The stroma cells are not only forced asunder by the ordinary fluids in the lymph channels, but the lymph fluids have become so abundant that œdema and transuded serum exists.



Fig. 18 (J. A. Amann) is a cut to show the surface epithelia (in places sectioned obliquely) and endometrial stroma cells. The stroma cells are irregularly forced asunder by accumulations of blood (tissue hæmatoma). In the hæmatoma is a leucocyte, L, of the disaster form; M, mitosis in the endometrial or interglandular stroma cells. Note the accumulation of fluid on one side of the mitotic cell (m), separating it from

the adjacent stroma cells. 5, points to two nuclei of the surface epithelia. 4, points to the position of the surface epithelial cells above or distal to the nuclei.

words the invagination of the utricular glands begins at the free end, myometrial end, or form at the lateral wall. The invagination is due to the increase of surface epithelia through excessive mitosis or proliferation of epithelia.

The form assumed by the utricular glands in the glandular hyperplasia, due to excessive mitosis, is of considerable interest clinically and microscopically. In the first place benign mitosis or epithelial proliferation consists in increase of surface area, and not increase of the super-unformed epithelial layers. Benign hyperplasia of glandular epithelia always consists in the increased area of a single epithelia layer several glandular epithelia layers placed over each other, super-unformed, are suspicious of malignancy.

The form of the hyperplastic gland will depend on the location of the proliferation. If vigorous epithelial proliferation arises in the territory of the zone of straight, narrow, glands, either the lumen of the gland must dilate or the proliferating epithelial layer enlarged surface area must fold toward the gland lumen. Also, the form of the proliferating gland depends on the resistance of the adjacent inter-glandular stroma. Besides the subsequent secretions alters the form of the gland by pressure as its mouth may be partially or wholly closed, forcing its evaginations of epithelial into the surrounding stroma.

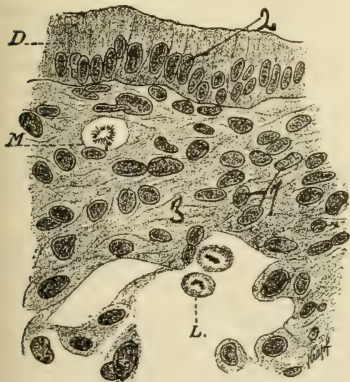


Fig. 19 (J. A. Amann) represents the surface epithelia and the stroma cells (stratum proprium cells). The surface epithelia (D) as well as the nuclei of same (2) are quite regular in size, shape and position. The stratum proprium mucosae cells,

or stroma cells, are regular in size, distribution and shape. M, stratum proprium mucosae cell or stroma cell in mitosis division. It is on equatorial plate. L, lymphocyte, two daughter cells already divided lying in a fluid medium (lymph) which is forcing asunder the stroma cells. 1, points to three stroma cell nuclei, and 3 lies on the stroma cell bodies. The lymphocyte cells may be mitotic at any point intra-stromal or intra-epithelial.

Some authors describe the evaginations of the epithelial layer into the adjacent stroma as divisions or branches of glands, but as remarked by Amann the examination of abundant material does not support the view.

If the whole gland epithelia vigorously proliferates and the adjacent stroma wall presents uniform resistance the elongated utricular gland assumes a spiral or cork screw form.

On section a spiral shaped utricular gland presents a serrated or saw-tooth form. It is doubtful whether surface epithelia of the endometrium is invaginated to form new utricular glands. But it is sufficiently probable that utricular glands proliferate from other utricular glands only.



Fig. 20 (J. A. Amann) represents the surface epithelia resting on three stroma cells. It shows a lymphocyte (L) which has wandered through the surface epithelia as the monaster form. 1, is the nuclei of the surface epithelia; 3, the nuclei of the stroma cells. The shape, size and distribution of the nuclei of the epithelia are quite uniform.

From the various forms of excessive proliferation of utricular glands invaginated, spiral, serrated, cystic, folded, evaginated, in short, the increase of surface area in a single glandular epithelial layer has received various names, as endometritis glandularis, hyperplesia glandularis, glandularis hyper-

trophia, glandularis cystica, glandularis ectatica.

The two characteristics of glandular hyperplasia in the endometrium are: (a) surface area increase of a single epithelia layer,

limited to transitional stages of epithelia located adjacent to the os uteri externum.

Hyperplasia of the surface epithelia of the corporeal endometrium is much less known than that of the cervical. Amann

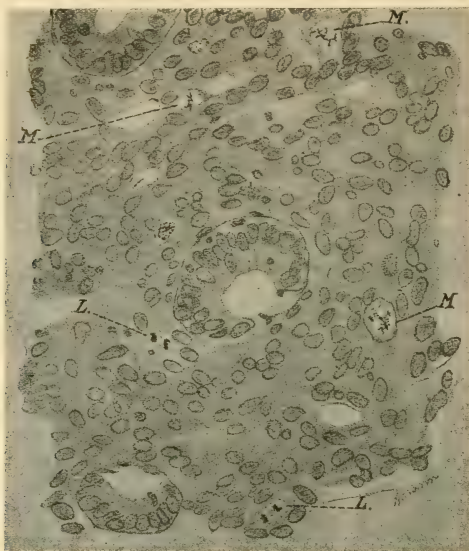


Fig. 21 (J. A. Aman). Interglandular hyperplasia and mitosis (M) with rich but irregular forms. L, two lymphocyte disasters. The glandular epithelia is partially destroyed, coalesced, from a previous inflammatory invasion. Observe that a large lateral segment of two glands are destroyed.

(b) definite limitations of the proliferating epithelia to the utricular gland.

Hyperplasia of the surface epithelia of the endometrium is especially manifest in congenital or acquired erosions of the portio vaginalis. The cervical cylindrical epithelia may be displaced found among the flat epithelia of the vaginal portion or vice versa. The process may consist in excessive proliferation, hyperplasia of the surface epithelia of the cervical endometrium invading the territory of the flat vaginal epithelia. The metaplasia consisting in the presence of flat epithelia in the cervical endometrium I have never observed, however, some authors mention it, as Amann, Abel, Gebhart, Schroeder, Veit, Ruge, Winter, etc. It is especially noticeable in the new-born. The dislocation metaplasia of the flat epithelia to the cervical epithelia was due to narrowing and obstruction of the cervical glands ending in cystic dilatation. It may be prudent to observe that many such cases are

with his much microscopical experience says it is rare to note flat epithelia on the corporeal surface endothelia. (Fig. 15, 16 and 17.)

In rare instances of active regeneration irregular circumscribed swellings are found covered with flat epithelia which, as noted by Prof. Rosthorn, may be now and then quite typical.

Hyperplasia of the embryonal or interglandular stroma cells of the endometrium is a common gynecological manifestation.

In this hyperplasia the stroma cell proliferates excessively, preponderating over the epithelial cell to such a degree that the name endometritis interglandularis or hyperplasia interglandularis is applied. The endometrial stroma cells multiply and increase in size. The protoplasm of the body may become so large as to be mistaken for a decidual cell. The differential diagnosis is difficult between the enlarged endometrial stroma cell and the cells found in dysmen-

orrhœa exfoliative (decidua menstrualis). According to the intensity of the proliferating process one finds the mitotic process in similar grade the kind of mitosis is generally formed, but it may by hypochromatic,

The anatomic findings of endometritis are according to the three principal symptoms, viz.: (a) In vigorous mucus secretions (cervical endometrium) there exists glandular hyperplasia with migration of leucocytes



Fig. 22 (J. A. Amann) represents inter glandular hyperplasia. M, mitosis; L, lymphocytes numerously distributed among the nuclei of the stroma cells. L, to the left points to a lymphocyte in disaster form; 2, points to the nuclei of the stroma cells of the endometrium. Observe the irregular and wide distribution of the stroma nuclei from œdema fluids. The irregular size and shape of the stroma nuclei is due to some extent to the different positions at the time of section.

chyrome or dysmetic (figures 15, 17, 18, 19, 21, 22, 23) as is shown in the excellent figures of Amann.

Hyperplasia of the vascular endothelia is observed in the mitosis of the endothelial cell lining the lymph and blood vessels. The endothelial cell is elongated and projects toward the vascular lumen. (Figures 23 and 24.)

The lymphocytes proliferate by the mitotic process. The mitosis of lymphocytes may be observed in the blood vessels, lymph vessels, glandular lumen, or intraglandular stroma. (Figures 17, 18, 19, 20.)

The interglandular hyperplasia shows by low power a great preponderation of interglandular stroma over glandular structures, and the glands appear compressed and rarefied.

If there be a combination of glandular hyperplasia and interglandular hyperplasia it may be termed hyperplasia diffusa. Besides associated with either glandular or interglandular hyperplasia may be genuine inflammation, whereby parts or segments of glands, or portions of interglandular stroma may be destroyed, coalesced, residues of part destructive endometritis. (Figure 21.)

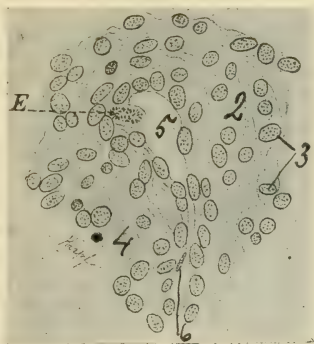


Fig. 23 (J. A. Amann). Endothelial mitosis. Interglandular endometrial stroma in which lies a vessel lined with endothelial cells of which one (e) is in a state of division, mitosis. The mitotic endothelial cell projects toward the vessel lumen, i. e., in the direction of the least resistance.

E, mitotic endothelial cell.

5, vessel lumen,

2 and 4, bodies of stroma cells.

3, nuclei of stroma cells.
6, an endothelial cell in the resting state.
The stroma cells are in a state of hyperplasia.

(b) In muco-purulent secretion (chiefly cervical endometrium) there is found round celled infiltration, leucocytes infiltration, both of which occur on an old floor or



Fig. 24 (J. A. Amann). Endothelial mitosis (e) and stroma cell mitosis (m). In other words, the endothelial and stroma cells hyperplasia M, mitosis of a stratum proprium mucosae cell. E, mitosis of endothelial cell. 1 and 8, endothelia in resting stage. 2, vessel lumen; 3, 3, lymph spaces in the endometrium, where the accumulated fluid forces the cells apart. 6, nuclei of stroma cells. The irregular distribution of the nuclei is due to fluid pressure (lymphoedema) and the difference in size and shape is due to the position of nucleus at the time of section.

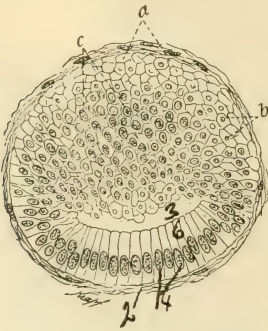


Fig. 25 (J. A. Amann). Oblique section through a utricular gland. In contradistinction to a typical accumulation or serial super-imposed layers of epithelia. The transverse section of the nucleus becomes always smaller (c, a, b) in places only the cell body without the nucleus is met (a) other places only the small point of the nucleus is met (b) 3, free surface of the surface epithelium. 4, nuclei of surface epithelium; 2, basement membrane of utricular gland.

through the glandular and surface epithelia.

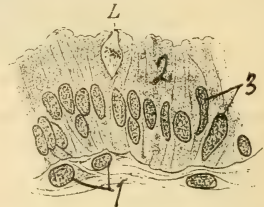


Fig. 26 (J. A. Amann) represents a lymphocyte (L) in a diaster form within the surface epithelium. 1, nucleus of stroma cell and 2, body of surface epithelium, both quite uniform; 3, stroma cell nuclei. The diaster formed lymphocyte lies at a higher level than the ordinary nucleus, it being larger than the nucleus is forced in the direction of least resistance.

glandular hyperplasia. (c) In menorrhagic glandular hyperplasia, but especially interglandular hyperplasia may be found. The hæmorrhagic transudates called and form the stroma apart and cleave the glandular and surface epithelia from its stroma in localized points. Besides blood is found in the gland lumen.

In this essay I am indebted to the labors of W. Nagel, C. Gebhart, and especially to J. A. Amann for his excellent cuts.

Laryngeal Diphtheria.*

By Dr. Eugene B. Glenn, Asheville, N. C.

In considering briefly the subject of laryngeal diphtheria, we will only mention diphtheria in common when it is necessary to make ourselves understood. I consider laryngeal diphtheria one of the most if not the most serious form of this disease, because not only do we have the toxic condition sufficiently present to produce death, but the danger of suffocation due to the formation of the pseudo-membrane covering the area of local inflammation.

The formation of this membrane in the larynx and air passages below assumes more the form which Virchow originally described as croupous. Some observers claim a duality of membranous croup and this form of diphtheria.

Pathologically it is difficult to establish this theory between the two different inflammations, and it is almost impossible to establish any dividing line between the two. Our diagnosis at the present time seems to depend upon the presence or absence of the Klebs-Loeffler bacillus which is the specific organism of diphtheria.

In 1894, 80 per cent. of the cases of membranous croup reported to the Board of Health in New York City, the diphtheria bacillus was found. So far as we understand, these processes differ in degree rather than character and that the croupous deposit is the stage of diphtheritic inflammation.

It is a difficult matter to decide why it is that in a case of diphtheria the inflammation present in the pharynx should be diphtheritic in character while in the larynx and parts below, the inflammation should assume the croupous type, unless we reason, as has been suggested, that the anatomical arrangement of the mucous membrane of the larynx and trachea fail to favor the development of diphtheria.

I believe that it has been clearly established that the Loeffler bacillus of diphtheria forms two different pathological conditions, respectively, in the fauces and the pharynx.

But sometimes we find a pseudo-membrane formed in the larynx without a diphtheritic process which would seem to indicate the fact that croupus laryngitis is a disease distinct from true diphtheria, both pathologically and clinically.

Pharyngeal diphtheria has a tendency to extend towards the larynx, trachea and bronchi, and sometimes in the nose. Extension to the larynx is indicated by hoarse-

ness or complete loss of voice, croupy cough, dyspnea, noisy and stridulous breathing, and if the inflammation extends to the bronchi, the breathing becomes still more embarrassed.

Diphtheria is undoubtedly produced by the specific organism described by Klebs and Loeffler, which, when it finds a favorable spot for its development, it produces an inflammation of a diphtheritic type. The organism does not enter the circulation but the toxin produced by its growth and multiplication does, and gives rise to the constitutional symptoms of the disease.

Children under ten years of age constitute the largest number of cases. It prevails in all climates, in all seasons of the year, but is more prevalent in the colder portions of the temperate climates, diminishing in frequency as tropical climates are approached. The disease is more prevalent in the cold and damp months of Fall and Spring. Defective hygienic surroundings, or anything causing a lowered condition of health, predisposes to the disease by weakening the power of resistance of the system. Enlarged and inflamed tonsils with ragged surfaces cannot be over-estimated as a marked predisposing factor in diphtheria.

We find diphtheria occurring epidemically, endemically and sporadically, and very frequently the epidemic form is seen in great virulence in rural districts far removed from sewerage system of large cities. But in this case the source of infection is found in some local cause, such as privy vaults and cess pools which have been neglected, and it has been conveyed long distances from communities where the conditions favored the development of the disease. In the cities, besides cess pools, such places as are permeated by foul air and dampness, where sunlight is obscure, we find a favorable source of infection of the disease.

In any locality where stagnant filth, decaying animal or vegetable matter exists, may also exist the origin of the contagion. The germs may be conveyed in drinking water, in milk where the water has been used in cleansing the vessels and diluting the milk, or it is found transmitted long distances by railways, in baggage, letters, clothing, or by the current of air in prevailing winds.

A number of the lower animals, such as cats, dogs, chickens, pigeons, sheep, cows, etc., are frequently attacked by diphtheria, and in that way may be instrumental in spreading the disease. There is danger in spreading the disease by patients who have been discharged as well, as has been de-

*Read before the Buncombe County Medical Society on March 19th, 1900.

monstrated by the finding of the Klebs-Loeffler bacilli in the throats of these patients.

In a large majority of cases the deposit occurs primarily on the tonsil from whence the pseudo-membrane extends backwards into the pharynx up on the soft palate, faucial arch or up in the nose. But in diphtheria the spread of the membrane is most commonly toward the larynx and air passages below. The false membrane is formed as a result of the lodging of the specific germ on the mucous membrane where it produces the disease and penetrates the epithelial cells by an inflammatory process characterized by dilatation of the blood vessels, and the escape of leucocytes and transudation of serum which undergo coagulation later upon exposure to the air.

Together with the contraction of the fibrinous bands and the excessive activity of the process, a tissue necrosis is produced. The pressure destroys the vitality of the false membrane and a large portion of the mucous membrane which separates in the form of a slough followed by a false membrane or by resolutions. The period of incubation varies according to the virulence of the contagion from two to eight days.

In the outset of the disease there are chilly sensations or well marked chills; the temperature is not much below 102; the pulse somewhat feeble and somewhat thready at this time. The throat symptoms develop almost coincidentally, with pain on swallowing, a sense of dryness and stiffness and extreme tenderness of throat, and in twenty-four hours by the swelling of the cervical lymphatics.

The exudation sometimes begins as small bluish white spots which in a few hours change to a yellowish color. Within twenty-four hours the membrane is complete and stands out prominently above the mucous membrane underneath. Sometimes in two or three days the membrane shows evidence of necrosis and a disposition to extend in different directions associated with a mucopurulent discharge.

The muco-purulent discharge constantly bathes the parts as the necrotic process develops. The inspired air dries the secretion and dead tissues causing it to adhere, and as a result forming additional annoyance to the patient.

The secretion and necrosis cause the breath to become fetid. The tongue which was at first coated and slightly moist now becomes dry, covered by a brownish looking fur. If life is prolonged as long as three or four days the membrane may be expelled either as a partial or complete cast of the larynx and trachea, followed by the

reproduction of a new membrane or by resolution.

When the tracheal membrane is expelled there is little likelihood of a reformation if the faucial exudation is progressing favorably at the time. The development and exfoliation of the diphtheritic membrane covers a period of from five to seven days, and the clinical history (providing death does not occur as a result of the tracheal exudation) in ordinary cases covers a period of two weeks or more.

The gravest symptoms up to the third day are those due to blood poisoning. The blood poisoning is due to the septic absorption of the products of the different organisms present.

The development of the false membrane may begin in the larynx as early as the second or beginning of the third day and rarely as late as the fifth day, which presents a more serious aspect of the disease at this time.

This condition is marked first by hoarseness, second by complete loss of voice and is soon followed by dyspnoea. Dyspnoea is recognized by cyanosis, abdominal and subclavicular depression, etc., and other symptoms characteristic of laryngeal obstruction. The re-occurrence of a febrile movement suggests the occurrence of the membrane in the larynx. A partial paresis of the respiratory muscles add no little to the symptoms of stenosis of the larynx.

The malignant form of diphtheria is a term that is applied to those cases where the blood poisoning is profound and an augmentation of all the symptoms of what is known as a typical form of diphtheria.

The mild form of diphtheria is a term that characterizes that form where a typical diphtheritic membrane is produced in the fauces associated with a slight febrile disturbance, which shows the toxin in the blood.

In this form the membrane shows no tendency to spread beyond the tonsils and such cases most always recover. If in the malignant form the patient survives three or four days there is frequently an involvement of the larynx producing laryngeal stenosis, and as a rule the patient dies before the dyspnoic symptoms can contribute to any marked degree in the death of the patient, therefore death results from toxemia rather than the formation of a pseudo-membrane.

In considering laryngeal diphtheria there is no points so important as a differentiation between laryngeal diphtheria and croupous laryngitis. In diphtheria the disease usually begins in the tonsils and extends downward, the exudation is cutaneous, often severe pains on swallowing, swelling of sub-max-

ilary and lymphatic glands, can be traced often to bad drainage, seldom much cough and then only hoarse, both contagious and infectious, often occurs in adults, often extends to the nares and other parts, septicæmia generally present, paralysis often follows, albuminuria frequent, death from syncope common, often occurs in adults, a constitutional disease, and the Klebs-Loeffler bacillus always present.

Croupous laryngitis or membranous croup is a local disease, begins in the trachea and extends up, exudation never cutaneous, seldom occurs in adults, not contagious, membrane does not extend to the nares, no symptom of septicæmia, no albuminuria, not followed by paralysis, death due to suffocation and seldom to syncope, not traceable to bad drainage, no pain on swallowing, cough always present, an asthenic disease and the absence of the specific germ will aid in making a differential diagnosis. A croupous membrane is thin, glazed, shining and of a white color, and easily separated from the parts beneath. A diphtheritic membrane is thick, of a velvety surface, soft, and of a yellowish color and closely adherent to the parts beneath. A croupous membrane remains croupous, and when it is exfoliated a cleanly aspect, healthy in color, is seen and is never attended by a muco-purulent discharge.

A diphtheritic membrane after the second day, when necrosis occurs, has a bluish black aspect with ragged edges associated with a muco-purulent discharge and the characteristic odor of necrosis. Any membrane beginning on the tonsils and extending to the soft palate and uvula, is probably diphtheria.

When the pseudo-membrane is stripped off in diphtheria it leaves a raw, bleeding surface, and with all these points of differentiation we often find cases where it is impossible to make a positive diagnosis without the aid of the microscope which enables us to decide positively in all doubtful cases.

There is almost a universal rule that the lymphatic tissues of the faucial and pharyngeal tonsils present such a favorable nidus for the germ that the primary origin of all cases of diphtheria is to be traced through the occurrence of a deposit in one of these lymphoid masses.

The unfavorable prognosis of the disease is universally known. The saddest memories of the healthiest and best developed children who have fallen victims of the disease, are associated with the name "Diphtheria." Where the process extends to the larynx the symptoms of a severe constitutional infection occurs, medical interfer-

ence has little or no power to prevent the unfavorable termination of the disease.

In laryngeal diphtheria the tendency to death in the main is due to development of the membrane in the larynx, which results in asphyxia. The highest percentage of death-rate is seen in this form of diphtheria. Age also plays an important part in forming a prognosis. The younger the patient the higher the mortality. Since the introduction of antitoxin the rate of mortality in diphtheria has been reduced.

Statistics show that the mortality is lessened in laryngeal diphtheria by intubation and tracheotomy. Clinicians seem to have demonstrated that by the use of antitoxin early in the diphtheritic process, that the extension of the diphtheritic process from the fauces to the larynx can be checked, and that fewer laryngeal obstructions occur and that more patients recover from laryngeal diphtheria without an operation.

The diphtheria antitoxin has no effect on the prognosis when mixed infection due to other bacilli are present sufficiently great to produce death.

Loeffler demonstrated first that micro-organisms, such as the streptococcus and staphylococcus pyogenes and other cocci frequently found in a healthy throat, when present in diphtheritic membranes in large numbers, succeed in poisoning the system by the formation of toxins and also in gaining access to the circulation and invading the interior organs, such as kidney, liver, spleen, etc.

It should be borne in mind that even a mild case may develop grave complications at any time, as is sometimes the case when the patient seems almost convalescent, suddenly dies from paralysis of the heart. Local paralysis, pneumonia and kidney complications may occur as sequelæ and precipitate a fatal issue in mild as well as a severe case of diphtheria.

In the treatment of laryngeal diphtheria, will only refer to some important points which will afford an opportunity for any who wish to discuss the treatment to give us their experience in the treatment in laryngeal diphtheria.

In the treatment of diphtheria we should first as far as possible counteract and control the constitutional effect of the toxemia and second destroy the infected quality of the inflammatory process and limit its extension.

In using the anti-toxin we have no way of determining the virulence and quantity of the toxin or the susceptibility of the patient. Frequently it requires a great deal more of the anti-toxic agent to neutralize the effects of the toxin. Therefore in decid-

ing the proper amount to give we must be guided by the duration of the disease and its locality and severity. We often have to repeat the injection of the anti-toxin when an insufficient quantity is given at first. It must be remembered that in laryngeal cases it is necessary to give a large initial dose.

Patients given this treatment the first day of the disease, before a mixed infection has an opportunity to occur and before the toxin has an opportunity to increase in quantity sufficient to produce a profound prostration in the patient, require less of the remedy and have a better chance of recovery; therefore in suspicious cases and croupous cases it is better to give the anti-toxin at once without waiting to determine whether the bacilli are present or not.

Since the anti-toxin has no influence over any other toxic condition except that produced by the Klebs-Loeffler bacillus, when a timely injection is given and there is a failure to respond to the effects of the anti-toxin, it indicates streptococcus infection, bronchial pneumonia or some other complication due to secondary infection.

In cases of laryngeal stenosis in a child over two years old the dose of anti-toxin should be from one hundred to two hundred units the first injection, and repeated within twenty-four hours at least if there is no improvement, and again the third dose may be given if necessary after the same interval. In severe cases in children under two years of age and mild ones over that age, 1000 units should be given and repeated as above or within eighteen hours if necessary, though a second dose is rarely required.

In favorable cases the injection is followed in 48 hours by general improvement with a fall of temperature. In most all favorable cases the local diphtheritic infection is arrested, the membrane separates rapidly or gradually and convalescence rapidly ensues.

I believe it would be well to use the anti-toxin for immunizing other members of the family when there is danger of their taking the disease. The quantity usually required for immunization varies according to the age of the patient, from 150 to 500 units of the anti-toxin. The immunity usually lasts three or four weeks.

Numerous antiseptics have been used in the form of sprays, inhalations, and local applications with good effects but none of them are specifics. Internal medication consists of such remedies as will sustain the vital forces and counteract as far as possible the toxemia. Our main reliance is some form of alcohol in the shape of whiskey or brandy which acts as nearly a specific against septic infection as any we can suggest.

Its administration is governed by the general condition of the patient which is more closely evidenced by the pulse. Digitalis and strophanthus, singly or combined, and carbonate of ammonia are often administered to regulate the heart action. Mercury, turpentine etc., are often used for the supposed definite and specific action on the disease. When a general tonic is necessary, quinine is given the preference.

In laryngeal diphtheria, tracheotomy and intubation have to be resorted to frequently. But just when operative interference is indicated, no definite directions can be given other than these, when other remedies are failing the laryngeal disease progressing, intubation or tracheotomy should be done at once because a large proportion of cases can be saved by early surgical interference before the vital forces are notably depressed by blood poisoning or by defective oxygenation.

When we stop to think how simple the operation is and when slight danger to life can be attributed to the operation itself, we should not question the propriety of resorting to it early in any laryngeal invasion. As to whether one does an intubation or a tracheotomy depends upon the age of the patient and the extent of the invasion in the air passages below.

Intubation sometimes promises the best results in children under four years of age; tracheotomy promises better hope of saving the patient after the age of five. When there is any indication of the rapid invasion of the trachea and air passages below, tracheotomy is preferable.

Without discussing at length the various considerations relative to the operations, their comparative value is shown by the latest statistics: tracheotomy, 27.14% intubation, 27.2% recovered. These statistics were taken without regard to the age of the patient.

DISCUSSION.

DR. MILLENDER.—One of the members of the society a little while ago asked me to tell him the function of the respondent. I told him I was sure I could not do so. I thought he was a sort of supernumerary. And certainly he has no function to right for Dr. Glenn has said everything on the subject of Laryngeal Diphtheria there is to be said.

But first in regard to the diagnosis, I am glad Dr. Glenn takes the position that there are two distinct diseases, producing in the larynx a false membrane. It is of vital importance to differentiate at the very outset between the two diseases. Laryngeal Diphtheria and Croupous Laryngitis.

I remember reading some years ago some German books and the claim was made without any reservation whatever that membranous Croup was diphtheria of the larynx. Reading more recently on that subject I see Basworth and other high authorities discuss the subject of Croupous Laryngitis as a distinct independent disease and Basworth remarks that the disease is often mistaken for and treated as diphtheria just a formally the the mistake was made of calling diphtheria of the larynx membranous croup.

In diphtheria of the larynx there are facts to establish the claim that anti-toxin administered early offers considerable hope of recovery. In Croupous Laryngitis this remedy is given in vain and even tracheotomy and intubation are also usually resorted to in vain.

Ten years ago I remember seeing a case of Croup that I thought was diphtheritic. It was in accordance with my previous training and with all the reading I had done, as I thought the best class of reading matter, to so regard it. The mother stated that for the first 24 hours so far as she could judge without a thermometer there was slight fever. A little later the child developed stridulous breathing. It went from bad to worse and in 48 hours she called a doctor, without any glass a little white patch could be seen on the epiglottis. In 72 hours that membrane had entirely disappeared and with a glass the vocal cords could be seen. They were deeply congested but no sign of false membrane was in sight. I gave favorable prognosis but in 24 hours after the child was getting decidedly worse. I gave all the remedies usually employed under such circumstances, but there was no improvement in the breathing. The child had no fever, no sign of poisoning by ptomaines, no albuminous urine, no constitutional disturbance whatever. I returned 24 hours later and found the patient laid out on the "cooling board." I prevailed on the mother to let me open the throat; that the disease was obscure in nature and that by examining the throat I might be of some service to the balance of the children in case they become sick in the same way.

I opened the trachea—the larynx was entirely free from obstruction, but in the trachea and extending into the large bronchi there was a white tough false membrane. It was not necrotic. There was no bad odor connected with it. This was the beginning of my doubt. I do not believe the patient has diphtheria. There was no diphtheria in the settlement and there was no spread of disease from this case. I have had more than my share of membranous croup. Two years ago I had two cases in the same family

which I diagnosed as diphtheria. I sent some of the exudate to the bacteriologist but I failed to get a report. The diagnosis however was vindicated here by its contagiousness. Both cases died the father of the children developed tonsillitis and an other doctor whom they called to see him declared that the case was simple tonsillitis and there had evidently been no case of diphtheria in the house. Bearing out one of Dr. Glenn's points in the differential diagnosis of the two diseases, one of these patients had a little patch of false membrane in the pharynx, and on its disappearance the larynx become obstructed.

Another case I remember to have seen began precisely the same way, had the same clinical symptoms, and on account of my previous experience I was inclined not to make a diagnosis of diphtheria. I did not quarantine the child, I did not report to the Board of Health, and did not give the parents to understand there was any danger from contact. The fifth day that child also died from suffocation. On one occasion there was considerable material thrown out from that child's larynx, no bad odor. I sent this to the bacteriologist and had it examined. I did not tell him what my case was. He inferred from the specimen it came from the lungs, and the doctor reported I had perhaps a case of pneumonia, not tuberculosis. Of course he meant that he found instead of tubercle bacillus the diplococcus of Fränkel. I believe membranous laryngitis as we find it in Asheville, where there is so much tuberculous trouble instead of being diphtheria is frequently croupous laryngitis. One of the doctors present will remember another case with which I was connected and which resulted fatally. A child on Penland Street was taken with croup, as his mother thought. The child had never had the croup before, but the mother was thoroughly familiar with croup and for 72 hours she treated it for a case of ordinary croup. I saw the child at the end of that time. He was breathing heavily, face congested, his tongue was coated, rather inclined to have a black coat, his bowels were constipated, he had scarcely any fever, kidneys in good condition. There was no evidence of any toxæmia. (?) On examination of the throat the pharynx was found perfectly clear, congested of course from the obstruction, and as far down as I could see all the membranes were found clear of any false membrane. I assured the mother that it was a serious matter but I could find no false membrane and I was sure the child was not diphtheritic. The breathing did not improve, the ordinary remedies were given in vain, and we finally had to resort

to intubation, also in vain. When the time came to do the tracheotomy that was too late, and the child died, I do not know of any disease that holds out less hope, that is more universally fatal than croupous laryngitis. I believe that the proper time for operation in those cases is early, just as I do in operation for appendicitis. The time to operate in laryngitis, whether it is croupous or diphtheritic, is early, so that the child may not suffer for air, because the child frequently does not suffer for air long before the doctor or the parent appreciates it.

DR. REYNOLDS.—My experience has been limited in this line. I have never seen a case of diphtheria that I thought was diphtheria, but following Dr. Millender's report of his case I will give a case which must be similar, though I never at any time saw any membrane whatever. He saw the case at the wind-up with me. It was the case of Rev. Dr. Byrd's baby. I was called to see it. It had no elevation of temperature; its breathing was rather harsh and had a croupy cough. I thought it was simple catarrhal croup, and would be well in the morning with ordinary croupous remedies. The next morning the child was not any better. The next afternoon it was no better. It never developed any elevation of temperature, but gradually its pulse was accelerated and weaker, so I called in a consultant, and after a careful examination of the throat we were never able to detect any soreness or congestion or any membrane, and finally I was called around in haste and Dr. Millender went with me. We called in Dr. Battle and Dr. Meriwether. Then it was too late to do anything, though we endeavored to use intubation tube. Even after drawing the tube out and a careful examination no membrane whatever was discovered. What that was I do not know. I thought it was one of those cases of croupous laryngitis, but I never saw any membrane from beginning to end.

DR. AMBLER:—A year before this case occurred in that house a child had what was a question at that time whether it was diphtheria or laryngeal croup. The child left and went to South Carolina. In a few days after the first child went to South Carolina it developed paralysis and died. I do not feel warranted in allowing a child to go into a house of that kind. You know of the controversy which arose in our newspapers in regard to that unfortunate case. Dr. Millender was the physician. I was called in consultation and the child died, and in going away from the house I made the remark that the other children had better stay away from the house. I made it

as I would in any other case of that kind. Father Marion called me up afterwards and asked if it should be a private funeral. I said: "You must ask Dr. Millender; he is the physician." He said: "Are you taking precautions in your own family?" I said; "I have changed my clothes and I do not propose to go home." He said: "There must be some danger." I said: "I am not the physician." That made a great stir. What I do not like about those cases is this: If there is any danger we should take every precaution to protect every child that may come in contact with that case. If the case is not diphtheria all well and good, but if there is danger to one there is danger to all.

DR. PEARSON.—The case reported by Dr. Reynolds is very similar to one I had some years ago. I had always thought and believed that laryngeal diphtheria and diphtheritic membranous croup were separate and distinct. I was called in to see a child two and a-half or three years old. There was no constitutional disturbance, no elevation of temperature, no signs of any membrane, yet the child had a croupy cough, especially at night. I gave the usual treatment of emetics, but no false membrane was dislodged, or at least very little. Sometimes it would throw up small particles of membrane. The case went on to a fatal termination. In the meantime the sister of the mother had come over to see the sick baby and had brought with her three small children. I pronounced it a case of membranous croup. Before the baby died I had called in a consultant, and the doctor I called also pronounced it membranous croup. Four or five days after those children had visited this child one of the little girls was taken sick, only she had constitutional symptoms and the deposit on the throat. After seeing her the second time I decided it was diphtheritic in character, and also called in consultation, and we treated that child heroically. That was before anti-toxin was used, and the child died. The three other children were taken down and two of them died on the same day a week later, the most virulent form of diphtheria I have ever seen. It was a very sad calamity. It was in a country town, and the whole neighborhood was excited, and we sought for the source of infection, and could find no other source than the first case we had diagnosed as membranous croup, and to my mind to-day I can find no other source.

DR. AMBLER.—I believe the most important part in the handling of this subject which the doctor has presented has been the diagnosis, and personally I have found it an extremely difficult matter to make the diag-

nosis early, of either diphtheria, membranous croup, or what. I did believe at one time in membranous croup as being a disease separate and distinct from diphtheria, but I have changed my mind in regard to that. I know many good authorities hold they are distinct, but I believe they are one and the same disease. I believe we can have a case of diphtheria or diphtheritic process at work upon the membrane, and still not get any great constitutional disturbance. We have in typhoid fever and in other diseases a condition where it is undoubtedly typhoid, but still does not run a typical course by any means. I believe the same thing can hold true in diphtheria. The diagnosis between diphtheria and tonsillitis is often a difficult matter, although as a rule the diphtheria does not start in like tonsillitis; the "term membranous croup" is, to my mind, a dangerous thing. I believe it can occur as a spasmodic disease, as a form of local inflammation in the upper respiratory tract. That is a simple form and generally over with in a few hours. Where are we going to differentiate? How are we going to say it is simple membranous croup? We can find no membrane. We have not a high fever. The child is getting worse from day to day, the breathing is getting more labored and the pulse higher, and because we cannot see a membrane in the throat, the nose, the pharynx or larynx are we justified in making a diagnosis of membranous croup? I do not believe we are. I believe the treatment should be exactly the same as a case of diphtheria. I believe if we handle it exactly the same as diphtheria we are on the safe side. I admit my position might be wrong, but in case that child has something which is *not* diphtheria the method of handling it which has been suggested is *not* going to do the child any harm, and in case later on it does develop that the child has diphtheria, then we have been proceeding under the proper course. We have quarantined the child and taken precautions with those who come in contact with the case and I believe the child has a better chance of recovery even if it is membranous croup. I do not see where the giving of antitoxin or the drugs which we are going to give internally are going to do the child any harm even if it is what has been called "membranous croup," and in case it is diphtheria I believe it is going to be the salvation of the child. Dr. Glenn referred to the contagiousness of the disease from pets. In my experience that has been one of the ways in which it can be conveyed, and of all the pets I believe cats are the most liable. I had the misfortune, with Dr. Millender, to be present with one of

his cases which died. When I went into that case I examined it carefully, and with the doctor I could see no membrane in the child's pharynx. There was no membrane in the larynx. We examined thoroughly. I told the doctor at that time I could see no evidence of any membrane, and I admit it it was not justifiable to make a diagnosis of diphtheria there, because the child did not have high fever and none of the symptoms of diphtheria, except it had labored breathing, showing there was some complication below the larynx. In fact, at that time the examination of the larynx itself did not reveal why the breathing should be so labored. There was swollen condition of the glottis, but not to the point of shutting off the child's respiration. We did not at that time make diagnosis of diphtheria and did not give anti toxin. 24 hours later we tried intubation and it failed. I take it that it failed for the reason that there was something going on in the trachea that our tube did not reach, and before we could get ready to do tracheotomy the child died. I believe in treating both diseases as the same disease. If it is diphtheria you are on the right track, and if it is not you are doing the child no harm.

DR. MILLENDER.—Dr. Ambler must remember that below the larynx usually the diphtheritic process is cut short. We have no such thing as diphtheria of the lungs, and diphtheria of the trachea is exceedingly rare. We do have false membrane in the trachea frequently, and in the bronchial tubes. We have such things as croupous pneumonia. To say we have no such thing as membranous croup aside from diphtheria is to deny the tissues the power of producing what we know to be a very common inflammation, viz., a croupous inflammation. You have a fibrous exudation there. The fibrine becomes coagulated and formed into a tough white membrane. The case just cited by Dr. Ambler, which we both saw, the child at one time, vomited a piece of membrane which looked like a piece of cartilage. It was just as clear and just as white. The case which Dr. Reynolds reported was to my mind a clear case of croupous laryngitis. He was totally unable to recall any circumstances under which it was possible for the child to contract any contagious disease. Everybody in the neighborhood came in to see the child. There was no other case contracted from that. That was something below the larynx. The tube was introduced and the larynx was found to be entirely free from any inflammation process and from any false membrane. The membrane was in the trachea and in the large bronchi, so that the child died from

carbon dioxide poisoning. This is the point I want to emphasize, that where the process is at work resulting in that inflammation called croupous inflammation you have the deposit by preference in the trachea, in the larger bronchi and in the lungs. You do not have diphtheria in the larger bronchi or the lungs as a rule. This disease prefers the fauces, the pharynx and larynx. There is one objection, I think, to using antitoxin in all cases. If you use it indiscriminately you are going to bring it into disrepute. You always have to get the consent of the parents to use it, and if you use it indiscriminately about three-fourths of your patients will die, and the time will come when you cannot get the consent of the parents to use it at all.

DR. McBRAYER.—I suppose from the card I received that the doctor would limit himself to laryngeal diphtheria, but I see he has covered all the ground. I have enjoyed the discussion very much. Dr. Millender has studied this thing carefully and fortified himself well, but I don't believe a word he has said. I mean his theories. We have certain general rules, as Dr. Ambler hinted, in disease, in typhoid fever in smallpox and every other disease. I had a patient a short time ago who was exposed to smallpox for several weeks in succession, and according to all the authorities I have ever read there are certain symptoms of rash in smallpox. This patient had the promonitory symptoms to perfection. She had pain in the head and loins, she had a rise of temperature and on the third day the temperature fell to normal, and there appeared five spots, macules, typical rose colored spots of typhoid fever. They disappeared under pressure from the finger. And that was the end. I have no doubt in my mind that that patient had smallpox. And yet, I don't believe there is a doctor in the United States that would diagnose it as such from this isolated case. That is the exception. It is a general rule that diphtheria begins on the tonsils and fauces, but because it does not is no sign that it isn't diphtheria. I remember a case I had. The gentleman was a farmer. On top of a knoll on his farm there was a large flat rock, and upon that rock he built his house. One of his children took diphtheria. So far as I could discover there was no possible means of contagion. The drainage was perfect in every direction and the child had never been away from home. There was no diphtheria in the country, but this child had a typical case, except it had no violent symptoms of poisoning such as temperature etc. The tonsils were covered and so was the palate. The child recovered. There was another child, a boy, in the

house, and later on I was called to see him. The throat was clear, but the nose was covered with diphtheritic membrane. There was no rise of temperature. The child recovered. I have no more doubt that that was diphtheria than I have that my other case was smallpox, though the throat was clear. I think with Dr. Ambler that it is a very dangerous thing to split hairs between diphtheria and laryngeal croup, in fact I believe that the term laryngeal croup should be stricken from our text books and our memories. When the issues of life and death hang upon our hands we should be very careful and for myself I would not care to take the responsibility.

I say we are treading on dangerous ground again.

DR. AMBLER.—I would like to ask a question, and also to state that I have seen a malignant case of diphtheria where we were trying to perform intubation, and inserting the finger into the larynx I found that it did not feel right, had not the feel that the larynx should have. In admitting the finger, there seemed to be some obstructions and upon working the finger around we withdrew a perfect cast of the trachea from the larynx, clear to the bifurcation of the trachea. That was a malignant case of diphtheria. I would like to ask Dr. Millender if he considers membranous croup and laryngitis different, if he would go from a child evidently going to die from strangulation, and from the fact that it has not high fever and has not membrane in its nose or throat that he can see, or in its pharynx, and has not the typical signs, if he would be satisfied to go from that child directly to other children without taking any precautions.

DR. SAWYER.—I am sorry I did not hear the discussion, but I would like to state that an old nurse went to a patient of mine and said she had thoroughly sterilized herself as best she could, and had fumigated her clothes with burning sulphur. In spite of all that sterilization and burning the child she attended did have a severe case of pharyngitis pure and simple. It was a pretty severe case, and after awhile the baby had a mild case and the mother had a mild case, but whether the nurse brought it or not I cannot say. I am a believer in membranous croup and diphtheria being one and the same thing practically.

DR. MILLENDER.—In the first place it is the duty of every doctor in each case like that to have a bacteriological examination made. In all such cases I do that if I find any membrane, and whatever the microscope says I depend on. In the case Dr.

Ambler refers to there was no membrane to be found. If we could have gotten any membrane to examine we would have examined it. We know that diphtheria is very contagious. Of course if I had a case of diphtheria I should sterilize myself. I would take every precaution to protect myself and everybody else, but if I had a case of membranous croup or croupous laryngitis I would still take precautions, but not the same precautions perhaps. You can have sore throat without having diphtheria. Almost all sore throats are infectious. How often does it happen that in the same family we have half a dozen cases of tonsillitis. Children kissing each other get croup. They get almost all the germ diseases. It is not entirely safe when the doctor visits a case of membranous croup, if there is not sign of diphtheria, to go to another patient without washing his hands, because the very books that distinguish these cases tell us that we must be careful not to scatter the disease by failing to sterilize. I would not like children to go in where the patient has an ordinary case of sore throat. I would caution the family against it.

DR. McBRAYER:—The absence of fever does not prove that it is not diphtheria. The absence of any known method of contagion does not prove that it is diphtheria. The fact that it does not spread all over town does not prove that it is not diphtheria. And I submit that granting, as no one doubts, that all the symptoms the doctor has presented, were present that while several of the prominent symptoms were absent yet it does not prove that it was not diphtheria. We all admit that diphtheria is contagious, but it does not absolutely follow that every child in the family should have it. While that is the general rule there are exceptions largely. I just saw a child go through smallpox for two months, and she did not take it and could not be vaccinated successfully. Vaccination would not take and the smallpox would not take. While I admire the doctor's astuteness and the arguments he has brought to bear, I submit we are treading on dangerous ground when we attempt to differentiate a thing of that kind.

DR. MILLENDER:—In all those cases I have enumerated not a single other case has occurred. Everybody was exposed, dangerously exposed, because no warning was given. The case of Dr. Byrd's little child was of the same character, in my opinion. Everybody was exposed, and there was no mitigation, no sterilization, and no second case arose. Diphtheria is a contagious disease. When it occurs in a house, if there are other children exposed, they are as a

rule going to have some kind of sore throat. Inasmuch as our personal experience is limited we have to be guided by high authorities, and the doctrine is established by all the authorities, I know, unless Northrup is an exception, that there are two distinct diseases; we have *croupous laryngitis* and *diphtheritic laryngitis*. We have to submit to those authorities.

DR. REYNOLDS:—I admit we are treading on dangerous ground, but it seems strange to me that when diphtheria is so highly contagious, that out of the cases cited by Dr. Millender and the great number of exposures and to my personal knowledge in the last case he cited I know there were 15 or 20 exposed and off and on every day for three to five days, some one of them would have developed in the children who had been exposed. Of ours we know that people are immune, but that is one case out of probably 500, but here, according to Dr. Millender's evidence, probably 500 were exposed, and none took it. The doctor enumerated several cases, and there never was a case of sore throat following it, and if diphtheria is contagious and one and the same disease, it is very strange that the statistics he has shown should result.

DR. MORRIS:—It might be true as has been stated that these cases with membrane or without it, or at least located where you cannot see it by any means. These may be mild cases with little membrane, and especially where it is not thrown out, and children might come in contact with it and yet not get the disease. As far as that is concerned there is good authority on both sides, about as much on one side as the other. Therefore each has a right to his own opinion. I believe it is possible to have diphtheria and have children exposed to it and yet not take it. I have a baby three or four years old who has been exposed to smallpox. This baby has been vaccinated four times. The vaccination has not taken, and it has no evidence of contracting the disease at all. It is highly contagious, the most contagious I suppose of all diseases. These cases of which Dr. Millender spoke would lead us to doubt if we took that and nothing else. I would like for anybody to tell me where true membranous croup stops and diphtheria begins. Coming at it practically, I would certainly isolate every case of membranous croup and treat it as I would diphtheria. As has been suggested, if the child had nothing more than membranous croup, which is not contagious, but which kills the child, if you give the treatment for diphtheria you will not hurt the patient. Dr. Millen-

der made one point about bringing anti-toxin into disrepute, but I do not think that would be so. I certainly would insist on isolating the case, let the membrane be superficial or deep. I believe it is one and the same thing, and should be so treated.

DR. TENNENT:—I have heard it said on very good authority in the history of diphtheria, that the first case of diphtheria in the United States made its appearance in '40's. The same authority states that membranous croup has been known time out of mind, so if there is no difference between them now why is it that the first case of diphtheria did not occur sooner? It seems to me I heard some old physician I met recently say that he treated his first case of it in Cincinnati some fifty years ago.

DR. MORRIS:—Tell me how it was that about six or seven years ago we got to treating appendicitis. We certainly must have had appendicitis before that time, but it was only recently we began to treat it as such.

DR. TENNENT:—Certainly, but I think you will find the statement in this history that the disease presented entirely new features. In the course of a few years it spread to all the states in the United States. I have not read up on it, but I just remember that fact.

DR. PEAVY:—There is something that may be said, and that is the symptoms are very variable in virulence. Sometimes it is mucous altogether, and the fact that it is found in the throat does not necessarily mean that diphtheria was present, because it might be one of those specimens that lost its virulence for the time. I do not know whether they are two distinct diseases or not. I have spent most of my professional life in a section where there is diphtheria, and I never saw but one case which might have been either one. The treatment was rather extraordinary in that case. I do not know whether I would do the same thing now or not, but at the suggestion of my professional friend and partner, who had practiced medicine in Texas and got the idea there, we gave the little colored child, two years old, 60 grs. of calomel. The results showed the wisdom of the suggestion all right. The little fellow was lying on the bed limp as a rag, and almost suffocated, and when we went back 12 or 14 hours later, he was sitting up on the bed with his breathing easy. His bowels had moved five or six times, and he got well.

DR. GLENN:—I have not much to say in reply. I believe there is such a thing as

false membranes produced where you can not find the diphtheria bacillus. I think oftentimes a diagnosis is made of membranous croup which is diphtheria. I believe this so much that if I am in doubt I always give the preference to diphtheria. I do not believe in waiting for the microscope in doubtful cases, but to treat as diphtheria. At the same time I believe there are two separate and distinct membranes pathologically. Clinically I believe in treating the case as specific until we have an opportunity of making a differential diagnosis. I think whenever we get a genuine case of diphtheria we always know it when we look sharply for symptoms. I am glad the paper brought out such a general discussion. I think every man who has taken part in the discussion took a good position from a scientific point of view, and held it firmly.

The Culture Test for Diphtheria at Ithaca.

Dr. Eadie, of Ithaca, N. Y., differed from the Health Board in regard to the quarantining of houses where suspected diphtheria patients were residing during the recent epidemic in that city, and would not respect the rules laid down by the Board. He objected to the quarantine which the Board put on the residence of one of his patients, for the reason that he considered his patient had recovered entirely from the disease. The Health Board ordered a culture to be made. Dr. Eadie made one and sent it to the Health Board, which found in it diphtheria bacilli and ordered the doctor to subject his patient to the quarantine. Then Dr. Eadie stated that he had made the culture from his own throat. Upon this the Board ordered Dr. Eadie to the contagious ward of the City Hospital. Dr. Eadie went to the Hospital, and while there consulted counsel, who advised him to leave the Hospital without considering the Board of Health. This he did and, moreover, declared that he was exposed to contagious diseases while in the ward and that if he should become afflicted with any of them it would go hard with the men who were responsible for his confinement there. Up to March 29th the Health Board has taken no action.—*Medical News.*

Phimosis and balanoposthitis occasionally occur in adults in whom no venereal disease is at fault. In these cases it is well to examine the urine before operating, for diabetes may be the cause, and in the latter case, it is not always safe to operate. Diabetic gangrene of the penis has also been mistaken for phagedenic chancre.

THE

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J. C. MONTGOMERY, M. D.

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VARICOCELE.

As we well know this is usually only an enlargement, a relaxation, of the veins of the pampiniform or spermatic plexus which returns the blood from the testicle.

But such a condition often gives rise to marked symptoms which imperatively demand interference on the part of the surgeon. There is a feeling of weight, or a dragging sensation in the testicle, with pain along the course of the cord and in the back, but oftentimes the most prominent symptoms are mental. The patient is pursued by an undefined fear or dread, constantly brooding over his undone condition and feelingly laments his failing sexual powers.

Only recently a man, 30 years of age, stout and seemingly robust, earnestly desiring treatment for a slight varicocele, refused to go into a hospital because his father would not be allowed to sleep in the room with him. His mental condition in certain respects was like a boy's of six years of age.

In most cases a surgical operation is re-

quired, especially in those having mental symptoms, no matter how slight the venous enlargement, and the open method is better than the subcutaneous. A two inch incision is made over the plexus and after separation from the underlying structures, the veins are ligated at the upper and lower part of the incision, and the intervening part cut away. If there is much dragging of the testicle the two ligatures should be tied together before cutting the ends. Catgut is the proper suture material, and the external wound is closed without drainage. The improvement in the mental condition is noticeable almost immediately after the operation and is rapidly complete, the result being very satisfactory to the patient as well as the doctor.

VAGINAL INJECTIONS OF HOT WATER DURING LABOR.

The use of hot water for inducing premature labor is discussed by Lorain in *La Revue Medicale*. According to Treatment it was found that hot water acts more energetically and more quickly than cold, and causes good contractions of the muscular tissue of the uterus and vagina. The contractions set up by hot water continue much longer than those set up by cold, and the hot water seems to cause not only muscular contractions, but also contractions of the actual blood-vessels. From these facts the oxytocic and hemostatic action of hot water has been established.

It is admitted that injections of hot water for the induction of labor are uncertain, but during labor they certainly cause contractions which still retain their usual intermittent character. The injections should be given slowly, the receptacle for the water not being raised more than two feet above the level of the bed. Two to four quarts may be used at a time, repeated in an hour if necessary.

The temperature of the water should be from 112 to 120 deg. F., and the strictest asepsis must be carried out during its use.

In general the method is indicated whenever there is insufficient uterine contraction. In anatomical rigidity of the cervix of elderly primipara the injections proved of great value, causing increased uterine contractions and soon overcoming the rigidity of the cervix. In pathological rigidity due, perhaps, to syphilis, and in true spasmodic rigidity which is very rare, the injections are of doubtful benefit.

In the spasmodic cases, morphine, chloral, or other anti-spasmodics, give much better results.

In uterine inertia, not due to an insuper-

able obstacle to delivery, and in relative inertia, due to hydramnios or twins, the injections may be used with advantage.

The contra-indications are spasmodic rigidity of the cervix, uterine tetanus and bad cases of pelvic contraction, or other insuperable obstacle to delivery. The injections should be limited to the period of dilatation.

HEREDITY IN SYPHILIS.

There are so many exceptions to the laws in regard to hereditary syphilis that we are often confused in our study of this subject by the contradictory statements of the several writers.

According to Treatment, Raymond in *Le Progres Medicale*, discusses the subject under three heads:

First, when both parents are syphilitic, if the infection is recent the child will be born syphilitic, especially if born during the first year of the parental disease; if the parents are in the tertiary stage the child is born healthy in the majority of cases. The child may be born healthy if the parents have been well treated before conception. The point in this connection is the lapse of time since the primary disease of the parents. If the syphilis is recent, the child is usually killed in utero, in the course of time or as the result of treatment, further children are born dead, later born syphilitic, and still later healthy (Diday's "Law of Decrease").

Second, when the father alone is syphilitic he may beget a healthy child, when the syphilis is recent, though this is rare, or when it is old-standing, or in the case of treated syphilis.

Third, when the mother only is syphilitic it depends on whether it is ante-conceptional or post-conceptional syphilis. Of ante-conceptional syphilis, if the infection is recent the child is killed in utero, or is born syphilitic; if the infection is old the mother gives birth to a healthy child. The nearer the time of conception the disease is contracted the worse is the result, but the influence of treatment is evident in such cases. In the post-conceptional form the transmission is by the placenta and not by the ovum. If the disease is contracted in the first half of pregnancy the child will be syphilitic, but if in the second half there is more chance of a healthy child; that the later the mother's contagion, the greater the chance of a healthy child.

As regards the transmission of the poison through the placenta it has been clearly shown that the toxin can pass with ease, and after the toxins have passed for some

time the virus itself may go through the same channel. A diphtheritic or tetanic toxin injected into the fetus will traverse the placenta and kill the mother.

By this passing of the toxins the fetus may be immunized, but the immunity is variable. In such cases the syphilitic mother may suckle her healthy child without infecting it. Heredity in syphilis may show itself in the transmission of a peculiar soil resulting in troubles of nutrition, and so we can not tell how many deformities and arrests of development such as talipes, spina bifida, hare lip, etc., are the manifestation of hereditary syphilis caused by the action of the toxins of the generators on the product of conception.

All infection of parents which shortly precedes the act of procreation is formidable for the infant. And on this account syphilis is the most dangerous of infections, and one the effects of which must be well recognized in considering the grave problems of heredity.

GUNSHOT WOUNDS.

We are getting some valuable information along with other things from the South African war. In general we find that the modern army rifle, while of far greater range and accuracy, is less destructive than the out-of-date Springfield. The Mauser will shoot entirely through a man a mile away, but the man is not much the worse for it. He lays up in the field hospital and in a few days is back at his post again.

We had about settled down to the conviction that, in all gunshot wounds of the abdomen, an early section was the safest and most effective method of treatment. But this idea will have to be modified and exceptions made for certain bullets of high velocity.

In abdominal wounds from the Mauser bullet, complications are very rare and the recovery rate is rapid.

According to the London correspondent of the *Medical News*, Treves, the celebrated English surgeon, has been very much disappointed at the lack of opportunity for abdominal surgery at the front. Apart from patriotic motives, his professional interest in this phase of surgery was the chief reason for his going to the seat of war.

But it shows the greatness of the surgeon when he can lay aside the preconceived ideas of all his past experience and see the indications of the present. To most of us the opportunity would have been seized and our own ideas carried out regardless of the combined experience of those around us. In speaking of a fearful penetrating

wound of the abdomen he says: "Following the indications taught by this campaign, I advised against operation and the patient made an excellent recovery."

The tendency of modern warfare seems to be to make the artillery, the big guns with their lyddite shells, as terrible as possible, while the small arms are swift and easy.

THE DOLLAR AND THE DOCTOR.

They were never intended for each other and are an ill-matched team. The dollar pulls too strong and the doctor gets winded trying to keep the slack out of his traces.

When the Fates were distributing their favors to the different occupations, they gave to one pleasure, to another worry; to one wealth and to another work.

But when it came the doctor's turn, the cards had become mixed, and so they drew double with both work and worry written in letters large and bold.

Some have tried to kick out of the harness, but to no avail. There can be no alteration of their relative positions, and so the physician, who has an immense fortune left him by an aunt, immediately gives up his profession.

In the heart of the true doctor there is almost a fear of money. I remember seeing once a living picture of despair and distress; a physician was asked the amount of his bill for two nights and a day's hard and terrible struggle, but successful, to save a mother and her child. He was a country doctor accustomed to dark nights, muddy roads, swollen streams, freezing winds and scorching sun, but this question asked in the presence of several people, seemed to take all the light out of his eyes, and the veins of his forehead stood out like they would burst. For several moments he was the picture of complete confusion, and when he did get his breath he could only whisper \$12.50. It was a new patient, a prosperous farmer, and the bill was paid in the fall, eight months later, after a \$2.50 discount, which the doctor readily gave, as he had forgotten how weary those two nights were and the tiresome length of the day.

I thought it out in this way, he had just come from a hand to hand fight with death, hungry and greedy for two lives instead of one, he was not concerned about reward or praise, his mind was too full of the mother and her unborn child to consider dollars and cents, and so the question simply knocked the props from under his exaltation and suddenly dropped him to the low level of everyday life.

People should be more careful of the feel-

ings of their medical attendants, and this query about the bill should never be asked except in private, and even then it should not be accompanied by the rustle of stiff paper or any kind of rattle.

Some doctors may say that they are not afraid of any such shock, but they only show a lack of experience, and sooner or later the trial will come to them in all its power. When the patient has waited until the following spring to ask about his account of course you are prepared, or when he waits until you send him a statement through the mail or by a collector, who is usually a cotton seed buyer, you do not feel the slightest twinge. But the question I am considering is, where the patient or his representative suddenly pounces down on you, within five minutes of the completion of your work, and, with a motion towards his inside vest pocket, ask you to name a few figures, you can hardly do it to save your horse from starving.

Such experiences only happen a few times during a life time, but they should be guarded against by having, convenient, a tablet of strychnine or a nitrite of amyl pearl. Older physicians in the country know to be on the lookout, when the call is to new people or even among old patients during the Christmas season when the head of the house is slightly under the influence of an unofficial spiritus frumenti. The younger members of the profession, whose arteries are not atheromatous, usually go through this experience without any severe reaction, but to the middle aged, especially those who have used lots of tobacco, this warning will be very valuable, if acted upon.

MEDICAL ETHICS.

The privilege of practising medicine is only legally given to those who have gone through a course of studies and training for its qualifications and who have received a testimonial to that effect. To this extent the civil law protects them. Medicine, that now may be called a science, is to the masses an occult science, and while one of the highest and most noble pursuits, is subject to the greatest debasement by deception and dishonesty. Hence the need of a code of ethics. The written civil law that fixes penalties for its violation can be and is often broken in its spirit, but the code of Medical Ethics holds the spirit of the law sacred. A physician by violating the code can damage another to the extent of thousands of dollars, and yet the losing physician can recover no damages in any court of justice. It all depends on the honor of those in the profession. Gambling debts are known as

debts of honor, because the law does not recognize them, and the men who do not pay them will be ostracised. How much more debasing is a violation of the Medical Code. The civil law does not apply to the remuneration of medical services as it does to other professional services. The physician does not deal in commodities as others do; that is, while a dishonest man would not openly steal money or personal property, a selfish physician is liable to steal a patient of a brother practitioner, which is as much a breach of honesty as the other.

A lawyer recovers \$300,000 damages for his client and gets a \$50,000 fee; a physician saves the life of a millionaire by a successful operation for strangulated hernia, but may get no larger fee than for treating a case of pulmonary tuberculosis, where with all his skill, his services are of no avail. He is only paid for his time and labor, and not for "value received." It is only after years of study and research his reputation enables him to charge handsome fees and yet how readily that reputation can be damaged by an envious or malicious physician who is only restrained from a too open hostility by his fear of violating the code.

Medical Ethics plays an important part in consultations and emergency calls. When a physician is called in consultation it would be a violation of the code if he should treat the patient independently of the one who consulted him, even if the family desired it. While that illness lasted, he should combine his treatment with that of the first physician, and under no circumstances should he do anything to cause the family or the patient to distrust him; but in any future illness, if the family preferred him it would be his privilege to respond to the call. When a physician is called in a case of emergency on account of the absence of the regular physician, he should willingly withdraw when the other is obtainable. In case of an accident, where the patient has no regular physician, and messengers are sent in all directions for a doctor, the one that first arrives is entitled to the case.

Some years ago, one of the most prominent physicians of New York thought by his sanctioning the practice of consulting with Homeopathic physicians, it would be incorporated in the code of ethics. One of the leading medical journals of the city sustained him. This brought out a hot fire from all the other medical journals of the country and they proceeded to show why it could not be done. The masses of the people have no comprehension of the meaning of Homeopathy. While so-called Homeopathic physicians may be graduates of a

regular school, may be scientific men, highly educated men and successful practitioners, if they have all these qualifications they are of necessity regular practitioners and sail under false colors to class themselves as Homeopaths. To sail under false colors is to be dishonest, and if they are dishonest they are unfit to consult with. They will tell their patients they practice both, meaning Allopathy and Homeopathy. Allopathy is as objectionable to the regular as Homeopathy, as both are restrictive, and the regular physician must take in all that science teaches in his profession and all that induction philosophy affords.

BOOK REVIEWS.

Gould and Pyle. A Cyclopedia of Practical Medicine and Surgery. A concise reference book, alphabetically arranged, of Medicine, Surgery, Obstetrics, Materia Medica, Therapeutics, and the various specialties, with particular reference to Diagnosis and Treatment. Compiled under the editorial supervision of George M. Gould, A.M., M.D., Editor of "The Philadelphia Medical Journal," etc., and Walter L. Pyle, A. M., M. D., Assistant Surgeon to Wills Eye Hospital. 73 Contributors. Quarto, Illustrated. Sheep or half dark green leather, \$10.00; thumb index, \$11.00. Half Russia, thumb index, \$12.00. P. Blakiston's Son & Co., Philadelphia. 1900.

When one turns the pages of this book he is struck with its magnitude, its simplicity and its completeness. Scarcely could a more all around, up to date book of one volume ever be published superior to this one. It is a medical library complete within itself, and if all the other medical literature were destroyed, and the wisdom and instructions given in this volume were followed and carried out one would not be at a loss in the practice of medicine. This is a companion volume for Dr. Gould's Illustrated Dictionary of Medicine. This excellent volume is written by seventy-three contributors, prominent in medicine and surgery. It presents in a concise and authoritative manner, the most important facts in all branches of medicine and surgery that are of working value to the busy practitioner. It also provides a trustworthy hand-book for easy and rapid reference in physical and clinical diagnosis, general therapeutics, operative technic, materia medica, toxicology, and other subjects, concerning which information is constantly needed in undergraduate study and in daily practice. Diagnosis and treatment have received particular attention. A great

many minor subjects of genuine value to the physician, but usually held of too little importance for discussion in text-books are here given proper consideration. Numerous well tried and valuable formulas are distributed through the volume. All subjects are introduced in dictionary style, alphabetically arranged, and the individuality of each writer clearly shown. The author has classified diseases and injuries according to the parts involved. Numerous cross references have been given which render a general index unnecessary, and to facilitate reference large bold-face headings have been adopted, so that the subject matter of any page may be seen at a glance. This volume is certainly a most practical and concise one, and a book that will be constantly referred to in every day practice. The work is beautifully executed from a mechanical standpoint, and the publishers deserve much credit.

Progressive Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Physician to the Jefferson Medical College Hospital; Laureate of the Royal Academy of Medicine in Belgium; of the Medical Society of London, etc.; assisted by Charles Adams Holder, M.D., Assistant Demonstrator of Therapeutics in the Jefferson Medical College. Vol. I, March, 1900—Surgery of the Head and Neck and Chest; Diseases of Children; Infectious Diseases, including Croupous Pneumonia; Laryngology, Rhinology and Otology. Bound in cloth. 404 pages, 36 engravings and 1 colored plate. Issued quarterly. Price \$10 per year. Philadelphia and New York: Lea Brothers & Co.

It affords us much pleasure to find on our review table the first Volume of *Progressive Medicine* in its second year. That some work of this kind was much needed by the profession is clearly proved by the great success of the publication during the first twelve months of its existence. The work has been carefully prepared and it has been crowned with meritorious success.

This quarterly makes unquestionably one of the most complete and most reliable reviews of the advances in scientific medical literature with special reference to its practical applications that has yet been published. The editor has selected the very best contributors—men who know their business in their different departments and who do it well and thoroughly. They are men of experience, reputation and men whose opinions are respected. In this

volume the first section, containing 130 pages, devoted to the surgery of the head, neck and chest, is written by J. Chalmers DaCosta, M.D. His remarks about the surgery of the Face, Neck, Lips, Tongue and Mouth are very timely and up-to-date. Carcinoma, with its treatment, is very ably discussed by him; also his discussion on the Skull and Brain is interesting and instructive.

The second section, containing 94 pages, is from the pen of that fluent writer, Dr. Frederick A. Packard. He writes about Infectious Diseases, Typhoid Fever, Malaria and Pneumonia. Under this head he also gives a short treatise on Diphtheria and Cerebrospinal Fever. In the treatment of typhoid fever he mentions *Typhoid Antitoxin*.

Diseases of Children is next discussed by Dr. Alexander D. Blackader. The doctor gives us some good points of practical interest.

The subjects of Infection, Intoxication and Immunity are very ably and beautifully presented by Dr. Ludvig Hektoen. Laryngology and Rhinology by Dr. A. Logan Turner and Otology by Dr. Robt. L. Randolph and Vol. I closes.

No one can but be impressed with the character of this work. Everything is said in a good easy style and is something new. No superfluous material is given—only that which is concentrated and can be used with benefit. We congratulate the editor, the contributors and the publishers upon the most excellent manner in which they have issued *Progressive Medicine*.

Elements of Clinical Bacteriology for Physicians and Students. By Dr. Ernest Levy, Professor in the University of Strasburg, and Dr. Felix Klempner, Private Docent in the University of Strasburg. Second Edition enlarged and revised. Authorized Translation by Augustus A. Eskner, M. D., Professor of Chemical Medicine in the Philadelphia Polyclinic; Physician to the Philadelphia Hospital. 425 pages; cloth binding; Price \$2.50 net. W. B. Saunders, 925 Walnut street, Philadelphia, Pa. 1900.

The study of Bacteriology has grown very rapidly within the past few years. As progress has taken place in the other branches of medical science, so has great progress been made in Bacteriology. In fact Bacteriology has become more and more an indispensable aid to medical art. It has enlarged our comprehension of the nature of infectious diseases, and it has established their prophylaxis, diagnosis, and treatment upon a broader and firmer basis. In this, the second edition, chapters have

been added on Plague and Botulism, and those on Immunity, Diphtheria, Typhoid Fever, Actinomycosis, Examination of Air and of Water, and others, have been radically revised; and in all other sections numerous changes and additions have been made. The authors have kept close to their original plan of simplicity and common sense. This is a very practical work, and should be in the hands of every practicing physician. He who reads this book can at once see that it is the product of men who know their own business and write that which is common sense and practical. We cannot speak in too high terms of the excellence of this work. The work speaks for itself. It is printed and bound in handsome style.

Skin Diseases, Their Description, Etiology, Diagnosis and Treatment, According to the Law of the Similars. By M. E. Douglass, M.D., Baltimore, Philadelphia. Boericke & Tafel. 1900. Price, cloth, \$3.50, net; by mail \$3.65.

Man is a composite being. We have the skeletal man; the muscular man; the arterial man; the nervous man; the venous man; and enclosing and protecting all these the skin—or outer man. This outer man is the one in whom we all take a greater or lesser *Pride*; the one that receives the greatest amount of attention; the one that more pains are taken to beautify and adorn than all the others; the one which any imperfection is soonest noticed, and for which relief is most promptly sought. It is in this work we find a thorough description, the etiology, the diagnosis and treatment of this outer man. The treatment of skin diseases properly and successfully is a very important thing to know. What not to do in this class of diseases is also a very important thing to know. The author has presented his subject in a very practical manner and with the finest words consistent with an intelligible presentation of the same. The book is clearly printed and contains 463 pages with good index.

Saunders's Question Compends No. 2—Essentials of Surgery, together with a full description of the handkerchief and roller bandage, arranged in the form of questions and answers prepared especially for students of medicine by Edward Martin, A.M., M.D., Clinical Professor of Genito-Urinary Diseases in the University of Pennsylvania. Illustrated. Seventh Edition, revised and enlarged with an appendix. W. B. Saunders. 925 Walnut street, Philadelphia, Pa., Price \$1.00.

This is the seventh edition of this little

work on Surgery. The demand for editions after editions of any work is satisfactory evidence that it is appreciated by the profession. This work represents as fully as possible in a work of this kind the present status of surgical theory and practice. These compends are well known. Since the issue of the first Volume of *Saunders's Question Compends* over 175,000 copies have been sold. This enormous sale is indisputable evidence of the value of these self-helps to students and physicians. This edition has a fine appendix containing full directions and prescriptions for the preparation of the various materials used in antiseptic surgery. Also several hundred receipts concerning the medical treatment of surgical affections.

The Anatomy of the Brain. A Text-Book for Medical Students. By Richard H. Whitehead, M. D., Professor of Anatomy in the University of North Carolina. Illustrated with Forty-one Engravings. 6½ x 9½ inches. Pages, v-96. Extra Vellum Cloth, \$1.00, net. The F. A. Davis Co., Publishers, 1914-16 Cherry Street, Philadelphia, Pa.

We are glad to come in possession of this book, not only for its worth as a scientific work on the Brain, but also because it is written by a North Carolinian, a Professor in our own University. The study of the Brain to the medical student is the most difficult part of the entire study of medicine, a study that is looked upon by the majority of medical students with dread and worry. Dr. Whitehead has prepared this work with a great deal of care and thought, and has arranged the subject in such a practical and pleasing manner that the difficult subject becomes a profitable and entertaining one. Dr. Whitehead is eminently fitted to write a book upon this subject, and we are sure it will meet with great success and be a great help to the weary medical student. The work is well and excellently illustrated and neatly printed.

The International Medical Annual and Practitioner's Index. A work of Reference for Medical Practitioners. Eighteenth year. Cloth. 748 pages, price \$3.00. 1900. New York: E. B. Treat & Co.

The whole range of medicine and surgery is covered in this volume, giving concisely but completely all the advances made in the science during the past year.

As a retrospect for the busy physician it demands a place on the desk of every progressive member of the profession. The first 60 pages are devoted to the new remedies of value, a chapter on Radiography, and then the different diseases are taken up

alphabetically, which is the body of the work. The references at the end of each important article comprises the entire literature of the subject which is at all recent.

Twenty pages of notes of Legal Decisions of interest to physicians are given, followed by the latest on sanitary science and a list of the principal medical works published during the past year, chiefly American. A very complete general index rounds up the volume.

Injuries to the Eye in their Medico-Legal Aspect. By S. Baudry, M. D., Professor in the Faculty of Medicine, University of Lille, France, etc. Translated from the original by Alfred James Osteimer, Jr., M. D., of Philadelphia, Pa. Revised and edited by Charles A. Oliver, A. M., M. D., Attending Surgeon to the Wills Eye Hospital; Ophthalmic Surgeon to the Philadelphia Hospital; member of the American and French Ophthalmological Societies, etc. With an adaptation of the Medico-Legal Chapter to the Courts of the United States of America, by Charles Sinkler, Esq., member of the Philadelphia Bar. 5½ x 7½ inches. Pages, x-161. Extra Cloth, \$1.00, net. The F. A. Davis Co., Publishers' 1914-16 Cherry St., Philadelphia, Pa.

This little work containing one hundred and sixty-one pages is the first book on this subject that it has been the reviewers pleasure of seeing. While it is not a work of every day use, yet of sufficient use to warrant its publication. Cases are very often presented in court where the opinion of the physician is taken as a basis for suit against some company whose liability is in question. This book will be a great help in giving this advice, and as a text-book covers the ground very thoroughly.

"Would Christ Belong to a Labor Union?" By Rev. Cortland Myers, D. D., pastor of the Brooklyn Baptist Temple. Cloth, 50c., with handsome Illustrations. Popular edition in paper covers, 10c. Street & Smith, publishers, 238 William street, New York City.

The title of this book is one which demands instant attention, it is not only positively striking, but a startling proposition, which one feels that they should give a more serious thought to.

The labor problem is brought forcibly to the front, and merits the attention which the author here endeavored to give it.

The author's unflinching attitude throughout the story in attacking wrong and evil, and upholding that which is just and right, deserves the merit and commendation of the whole reading world.

The story is refreshing from the begin-

ning to the end, and the reader has the reward of deriving a broader knowledge, a brighter outlook and the divine consciousness of grasping a glimpse of what Christ would do if called upon and what Christian readers should do to be henceforth regarded as such.

The relation of the workingman to the Church is set forth in no uncertain tones.

Policies and methods are set forth which pertain to no sect or creed, and which should be recognized by all Christianity.

It is a book of vital interest from beginning to end, and no workingman should lose the opportunity of reading the principles it teaches; neither can a man interested in the workings of the Church afford to be ignorant of the great truth it teaches.

Its teachings are not radical liberality, but clearly defines what has up to the present time been lacking, the connecting link between the workingman and the Church.

The author has performed a most difficult task in defining this all absorbing question, and it is to be hoped that he will see fruitful results of his work.

The Care and Feeding of Infants. Boston, Mass., Mellin's Food Company. 1900.

This is a pretty little book, neatly bound and handsomely illustrated. It contains many pictures of babies in the picture of health. These babies have all used Mellin's food. It treats of the care and feeding of infants from a scientific standpoint.

LITERARY NOTES.

THE "NEW LIPPINCOTT" MAGAZINE FOR MAY, 1900.—Quite appropriate to the May number of the "New Lippincott," which issues on April 21st, is the title of the Complete Novel, "April Showers," by Alice Brown, author of the delightful "Tiverton Tales." The title fits the story, too, in which clouds and sunshine chase each other in quick succession. Miss Brown is, like Mary E. Wilkins, a New England woman, clever and forcible, and her characters are drawn from the same soil. The difference in treatment of this love story makes the comparison interesting, and we wonder whether Miss Brown has not sometime lived where the wind is tempered, and the summers are long, for it seems as if she had been able to retain much of that atmosphere in bleaker Yankee land.

S. R. Crockett's story called "The Trouble of Israel" cannot be excelled in humor and tenderness, and is entirely worthy of the author of "The Stickit Minister."

"At Nightfall," by George Gissing, an English author of established reputation, is a story told by a sick man to his trained nurse about the only woman in the world he cared for. This woman had strong convictions and the courage to live up to a social law in which she believed. This is a case where the point-of-view makes all the difference.

Mrs. Hudson's fifth Mormon Story, "The Avenging Angel," has a gleam of humor in it to lighten the otherwise tragic tale about a Scotch woman who adopted the Mormon faith and dragged out an existence among the elect. Her husband joined the murderous Danites and became "An Avenging Angel."

The coming total eclipse of the sun is lucidly described by Julia MacNair Wright in a paper entitled "The Event of May 28th, 1900."

"The Siege of Plevna," Stephen Crane's third article in his series on "Great Battles of the World," bears with timely significance on Ladysmith and Mafeking.

Elizabeth Robins Pennell describes "One Way to See the Paris Exposition;" that is, on a bicycle to the beautiful suburbs of Paris; and she believes that any one who owns a wheel should not visit the Exposition without taking it along, because traveling accommodations and arrangements for such things have been carefully prepared.

John K. Mitchell, M.D., who, by the way, is a son of the distinguished author Dr. Weir Mitchell, has a poem called "His Excuse;" and other contributions of verse are by Theodosia Garrison, Clarence, Urmy, Florence Earle Coates, Marie van Vorst, and Tom Masson.

The May "New Lippincott" has as a frontispiece a reproduction of Frederick Melville Dumond's famous saloon picture "The Theatre of Nero."

Among the twelve striking papers in the May Forum may be singled out for special mention Mr. Clark's article on "British Policy toward the Boers"; "The Constitution and the Flag," by Hon. Charles Denby, late United States Minister to China; "Uncle Sam's Legacy of Slaves," by Henry O. Dwight; "The Approaching Presidential Campaign," by Henry Litchfield West; "The Hay-Pauncefote Treaty," by Henry Wade Rogers, of Northwestern University, Illinois; "The United States and the Future of China," by Hon. William Woodville Rockhill, the well-known writer and diplomat, late Assistant Secretary of State; and "Journalism in Japan," by T. T. Nakagawa, Secretary of the Japanese Legation at Rome.

The Living Age for April 28 will print the hitherto unpublished letters between Thomas Carlyle and Robert Chambers, which first saw the light in a recent number of Chamber's Journal. In the same number of the magazine, A. T. Quiller-Couch discourses feelingly upon The Minor Poet.

ABSTRACTS of the One Hundred Leading Articles of the Month.

Acute Septic Metritis and Peritonitis.

Egbert H. Grandin, in the American Journal of Obstetrics for April, recommends an exploratory abdominal section in obscure cases, sapremia having been ruled out and the symptomatic picture being of that type which lymphatic sepsis assumes.

In the presence of absolute indications it is not such a hard thing to operate, but if we wait for these it will be a hard thing to save the patient.

Sapremia is local from the start and the proper local treatment usually brings the patient around all right. But in those cases where the streptococcus gains access through some abrasion, the disease is general, or as he calls it, "lymphatic infection."

He reports two cases operated on with the best results, and concludes that while the vast majority of cases of puerperal infection recover under minor operative measures, about one per cent. die notwithstanding operative treatment, except where such treatment is resorted to early.

A sine qua non, therefore, is *early diagnosis*.

On the occurrence of septic phenomena in the puerpera she should be subjected to a most thorough physical examination, preferably under anesthesia, for the purpose of differentiating saprophytic and streptococcal infection.

Sapremia (saprophytic infection) yields to local operative measures, except where expectancy has ruled or streptococcal infection has been superadded. In such event major operation may be called for; as a rule, however, at a remote period from the date of initial infection.

When the clinical phenomena are of low grade, in particular where the pulse is rapid in proportion to the temperature—a *warning of general systemic infection*—sapremia having been ruled out, even though definitive focus of infection in the pelvis cannot be located (other sources of systemic disturbance, such as pneumonia, urinary toxemia, etc., having been excluded), exploratory abdominal section is indicated for ab-

solute diagnosis. Thereby early removal of the infectious nidus (be it tube or ovary or uterus, or all) becomes feasible before the system at large has been surcharged with infectious elements, when it is folly to expect aid from surgery of either minor or major type.

These conclusions will hold even though it is recognized that ordinarily we deal, not with pure infection, but with a mixed type, the clinical phenomena varying according to the predominance of one or the other recognized infectious element. It is for this reason that we cannot expect tangible results, as yet, from the serum-inoculation treatment of puerperal sepsis.

The streptococcic type of infection is so exceedingly rare that only exceptionally is hysterectomy demanded in the puerperal state.

Anesthesia in Children.

Carefulness in inducing general anesthesia in children is as necessary as in adults though some are disposed to think that a child is more or less immune to the dangers which beset the adult in this connection. Attention is called to the feeling among the profession by W. J. McCordie and C. F. Marshall in *Treatment* for April. However they are very unreasonably afraid of chloroform in children, that is persons under 12 years of age.

Some of the reasons given for carefulness in administering anesthetics to children are really certain indicators for the use of chloroform for this purpose.

The feebleness of the muscular system, the consistiveness of the mucous membranes especially of the respiratory tract and stomach, and the conditions of the nervous system in children calls for chloroform as the best and safest of all anesthetics.

In spite however, of the irritableness of the mucous membranes they prefer mixtures of ether with chloroform or chloroform and alcohol. The reflexes in children are of little use as a test for anesthesia and they recommend instead of the usual ones, that of smartly pinching the skin of the inner side of the thigh or of rubbing the ribs.

Children suffer from long deprivation of food and none should go longer than three hours fasting before the operation.

The quality of the food given before operating is important, it should be liquid, easily digestible, and nutritious.

Milk in many cases should not be given as under the influence of the dread it will lay in the stomach as undigested lumps of curd.

Locally anesthesia is naturally inapplicable in children.

Appendicitis: Third and Last Call.

We have not been on speaking terms with this subject lately and are still convinced that it does not belong to our set but on account of an excellent paper by Hugh H. Young in the *Maryland Medical Journal* for April, we will agree to speak on the subject—at a distance. The fact of the matter is the subject has been talked to death and the better read a man is the less he knows what to do in a given case. It will not be at all surprising if in eight or twelve years, the great political parties take up the two sides of this question as platform material.

Young reviews the literature and society transactions of the world and finds that there is general agreement in the following particulars: The high mortality of severe acute cases under any treatment;

The successful issue in mild cases regardless of treatment;

The freedom from danger of the interval operation in chronic cases;

The large percentage of relapses after one attack, (between 40 and 80 per cent).

There is general disagreement on all the other points.

He concludes by showing the urgent need of exhaustive statistics, especially those prepared according to the analytical method of Archibald. But we think some men would not be convinced if there was a revelation from heaven on this subject and so the best we can hope for is an exhaustion of the gas on the issue. When there is so much wind there is fermentation and a gold cross should go to the man who discovers a genuine literary antiseptic.

Apparent Death.

The legislation needed in regard to apparent death is discussed by Henry J. Garriques in the *Medical News* for April 14th.

At present it is the business of the laity to say when a person is dead, and the physician has only to say of what disease the patient died, and the body is allowed to be buried. And yet the question whether a person is dead or alive may be one of the most difficult to decide, and may require the nicest physical and physiological tests.

After naming a number of signs of death he admits that there is but one sign which is without exception, and that is the decomposition of one of the vital organs. And so the best test of all is to keep the body in a waiting morgue of some kind until all doubt is removed.

He further calls attention to the fact that absolutely no protection is given to the bodies of those supposed to be dead, but

they are left to the tender mercies of the undertaker, who immediately places them in an icebox and effectually extinguishes any spark of life they may have left.

One important prescription of the law should be that until a certificate of death has been filled out and signed by the proper authorities, the supposed dead is to be treated as living, and it should be made a crime to treat him in any way that would cause him pain or do him harm if he were living. This would put a stop to the placing on ice or hauling the body out of bed and removing it to an ice cold room or carrying it into the yard.

Cleanliness in Minor Gynecology.

Attention is called to the importance of this matter by Alex. J. C. Skene in the New York Lancet for March. He relates the case of a certain gynecologist doing a large office practice, who had a number of cases of vaginitis which started up in patients under treatment. On close questioning it was found that his tampon material was absorbent cotton done up in the usual way and while being used it was kept in a drawer of the operating table.

Acting on a suggestion he used only sterilized cotton and had no further trouble in that regard.

Other cases are related showing the evil effects of unclean instruments or dressings in the local treatment of uterine disease.

He recommends rubber gloves for digital examinations and they are sterilized after each time that they are used. For instruments he prefers the formaldehyde sterilizer and for cotton, gauze, pessaries and towels he uses the steam.

In closing he calls attention to the danger of handling dirty money. Some of us are inclined to joke on this subject but the danger is unquestionable especially in a large office practice where patients are treated in rapid succession.

Cancer of the Cervix complicated by Pregnancy.

In these cases the outset of cancer is usually subsequent to conception as the presence of cancer of cervix almost precludes conception says Geo. Ben Johnston in the Boston Medical and Surgical Journal for April 19th.

He divides them into three groups each having its own indication for treatment.

First: Those cases in which the cancer appears before the termination of the fourth month of pregnancy and remains limited to the cervix.

Second: Where the disease is discovered after the fourth month and remains limited to the cervix.

Third: Where regardless of the stage of pregnancy, the disease has extended to the vagina, and possibly neighboring structures, rendering the condition inoperable.

In the first and third groups the indications for treatment are apparent, positive and constant. While in the second group the method of procedure will vary.

In the first group of cases we cannot consider the life of the child and the case must be treated as though the woman was not pregnant that is by hysterectomy.

In the second group if the disease is progressing slowly we should endeavor to save both mother and child by waiting until the time of probable viability then cesarean section and complete hysterectomy. But the case must be closely watched and if the cancer is developing at all rapidly, we must sacrifice the child in the interest of the mother.

In the third group we can only hope to save the child and the mother should be supported until term and the child delivered by cesarean section.

He reports two cases in the first group and one in the second, all making good recoveries after operating.

Carbolic Acid Injections for Hemorrhoids.

John L. Jelks in the Memphis Medical Monthly for April reports a case which shows some of the fearful effects of the injection of carbolic acid in the treatment of hemorrhoids. The patient had a small hemorrhoidal tumor injected and a few days thereafter the pain which had been constant since the injection was made, increased, and a few days later she began to discharge pus from the bowels. This sloughing process continued until the whole perineum entirely sloughed away. The engorged and inflamed bowel protruded in a gangrenous mass the size of a cocoanut. The woman will die of sepsis in spite of all that can be done.

He concludes that carbolic acid injections does not cure hemorrhoids, but, on the contrary, are fraught with great danger and should, in the future, be stamped with the disapproval of the entire profession.

Diet in Typhoid Fever.

Milk is not considered the very best food in this condition according to Andrew H. Smith in the International Medical Magazine for April.

He says a diet which has stood the test of considerable experience includes (milk) broths, soft boiled eggs, junket, custard,

the soft part of raw oysters, milk toast, scraped chicken, scraped beef, chicken and rice boiled to a jelly, sago, tapioca, corn starch, and animal jellies.

From these articles an agreeable variety can be arranged, and, by careful watching, any article can be excluded that seems to produce flatulence or other symptom of imperfect digestion.

Strict diet should not be continued too long as sometimes the temperature will come down to within a degree of normal and hang on there for an indefinite time unless the diet is cautiously increased.

This has been so often noticed in the hospital service that the internes have come to call it "starvation fever."

Milk can be better adapted to the use of some patients by diminishing the percentage of casein. This is done by allowing the milk to stand in a cool place for five or six hours and then pouring off the upper half or two-thirds, the original bulk being restored by the addition of water. At any time the monotony of the diet can be relieved by the adding of coffee to the milk, which besides improving the taste of the milk, is of value as a heart stimulant.

Diffuse Septic Peritonitis.

Geo. R. Fowler in the Medical Record for April 14th, gives a new method of treatment for this condition, namely, the elevated head and trunk posture to facilitate drainage into the pelvis.

He says that virtually the peritoneum is an enormous lymph sac and therefore peritonitis is lymphangitis.

He claims that not all of the regions of the peritoneum has the same physiological power of absorption but that it is greatest in the region just beneath the diaphragm next in the intestinal area and least so in the pelvis.

It will be noticed that his position is just the reverse of that advocated by Clarke. The angle assumed has varied in his different cases but he insists upon the elevation of the head of the bed at least 12 to 15 inches from the horizontal.

To prevent the patient slipping down a large pillow is placed folded beneath the flexed knees and upon this the buttocks rest. The pillow is prevented from slipping by a piece of stout bandage passed through at the folded portion and secured to the sides of the bedstead. Drainage is cared for by large glass drainage tubes which are frequently aspirated.

In nine consecutive cases treated by this method all recovered, while in nine cases treated by the ordinary method five died.

Drug Values in Whooping Cough.

A report of 752 cases of whooping cough treated by various remedies is made by Charles G. Kerley in the Archives of Pediatrics for April.

In order to test the value of the different drugs the plan suggested by Holt was carried out.

The cases as they developed were divided into groups of twenty and were allowed to cough untreated until the height of the the paroxysmal stage when the drug selected was brought into use.

Steam inhalation, medicated with creosote, turpentine and wine of ipecac, were decidedly beneficial. Vapo-cresoline had no effect whatever.

Among the internal remedies alum, fluid extract of horse chestnut leaves, and dilute nitric acid proved valueless or objectionable.

Quinine seemed of some benefit when it could be given in large amounts. Belladonna did not influence a single case in the slightest degree. The bromides, antipyrin, plain steam sprays and fresh air gave the best results.

He believes that every case of whooping cough may be ameliorated either by modifying the severity or by diminishing the number of paroxysms. In many cases both the severity and the number of paroxysms may be favorably influenced.

Remedies sedative in character, with fresh air, furnish the best results.

If a remedy is to be of service its beneficial effects will be noticed in twenty-four hours, always within forty-eight.

The best results are obtained when the antipyrin and bromide are commenced at the height of the paroxysm and then pushed. These remedies being sedative in character the effect may be lost in a prolonged case requiring a change of treatment.

Children may have whooping cough and never whoop.

Ectopic Pregnancy.

Appendicitis or torsion of the pedicle of a small ovarian cyst may be readily mistaken or confused with a ruptured ectopic pregnancy especially if there is a history of menstrual irregularity and vague symptoms of pregnancy says Henry C. Coe in discussing pain as a pathognomonic symptoms of ectopic pregnancy in the Medical News for April 21st.

He concludes that pain alone, when not accompanied by a clear history of menstrual irregularity, symptoms of pregnancy, and the presence of a tumor at the side of the uterus or in Douglas' pouch, known to be of recent origin, is pathognomonic of ex-

trauterine pregnancy only under certain conditions. The conditions are; that the pain is of a sharp colicky nature, distinctly localized on one side, attended with faintness more or less marked, and usually followed by intervals of hours or days of complete remission. The pulse is accelerated during the attack, but there is no rise of temperature. The latter is an important symptom distinguishing ectopic from inflammatory conditions. The violent tearing pain attending intraperitoneal rupture is accompanied by the unmistakable evidences of internal hemorrhage. In extra-peritoneal rupture the symptoms vary in severity according to the amount of blood lost, but soon subside, being succeeded by the usual evidences of pressure resulting from a mass in the folds of the broad ligament which displaces the pelvic organs. A persistent pain following the acute attack may indicate localized peritonitis.

Extrauterine Pregnancy.

A case of extrauterine pregnancy which became intraperitoneal is reported by J. Whitney Hall in the *American Practitioner and News* for February 1st.

The patient menstruated last on December 3rd, 1898. She had a fight with another woman December 9th, and received a severe blow in the region of the left ovary.

About four months later she had a severe attack of pain with flooding and was treated for miscarriage. Abdomen continued to enlarge however and about the sixth month she felt the fetal movements.

September 3rd 1899, or nine months from last menstruation she had what she thought were labor pains continuing some time but gradually subsided.

Three months later, she was examined under an anesthetic, the uterus found empty and a diagnosis made of extrauterine pregnancy and an operation advised, and accepted.

Child was delivered through the incision without difficulty but the sac, on account of adhesions, was hard to remove.

The author concludes that the ovum in left fallopian tube became impregnated about December 3, 1898, the last menstrual period.

Tube was injured by a blow during fight, December 9, 1898.

In nature's effort to expel the foreign body from the tube in April, 1899, tube was ruptured, and fetus enclosed in placenta escaped to broad lagament, and continued in its growth to maturity.

About September 1, 1889, at time supposed labor pains came on, child died.

This was at first tubal pregnancy, and became intra-peritoneal pregnancy by the escape of the child from the tube to the peritoneal cavity about the fourth month of pregnancy.

This is a remarkable case because of its being an intra-peritoneal pregnancy, and because of the uninterrupted recovery of the patient after carrying a dead child for three months.

"Floaters" in the Urine.

The word floaters is applied to many things, some that float and some that do not.

Ferd. C. Valentine, in the *New York Lancet* for March designates as floaters any of the substances that come from the meatus with the urine. He makes the following classification:

Shreds—Coarse, medium, fine; large, medium, small.

Filaments—Coarse, medium, fine; long, medium, short.

Flakes—Coarse, medium, fine; large, medium, small.

Granules—Coarse, fine.

The conduct of the floaters varies in accord with the specific gravity of the urine in which they are emitted.

Some rise to the top of the urine, some sink slowly to the center of the urine, some sink rapidly to the center, some sink slowly to the bottom, and some drop quickly to the bottom of the urine.

Roughly speaking, we may with Guyon say that:

Floaters which rise in the urine are constituted mainly of mucus and epithelium.

Floaters which sink to the middle of the urinary column have pus added to the mucus and epithelium.

Floaters which sink contain a preponderance of pus over the mucus and epithelium.

Female Pelvic Disease in Country Practice.

Laceration of the cervix, laceration of the perineum and fissure of the perineum are the three conditions discussed in this connection by E. M. Miller, in the *Kansas City Medical Record* for April.

In regard to laceration of the cervix he has a word to say to those who waste time applying-tampons. These iodine-soppers he considers a disgrace to the profession as they use the same treatment whether the case is one of chronic endometritis or cancer of the uterus.

The proper thing to do is to make a fresh

incised wound, bring the two raw surfaces together and make a healthy cervix.

In fissure of the perineum, he says, we find only a slight redness of a very small surface at the extreme lower angle of the vaginal opening, which is painless unless the parts are put on the stretch.

The treatment is by denuding the adjacent surface, as you would in perineal repair, and bringing the surfaces together with a few sutures.

Gonorrheal Urethritis in the Male.

The following reasons for the negative and decidedly inferior results obtained in the treatment of gonorrheal urethritis are given by Chas. A. Labenberg in the Virginia Medical Semi-Monthly for March 23d.

The small size and inaccessibility of the lumen of the urethra.

The general opinion among the laity that this disease is no worse than a severe cold, thus allowing the disease to gain considerable headway before applying for treatment. The disease, by this time, may have extended back to the prostatic urethra or seminal vesicles, and in very severe cases, to the ejaculatory duct and vas deferens.

The apparent neglect of the physician's advice as regards alcoholic drink, sexual intercourse, diet, hygienic rules, etc.; and

The utter impossibility of watching the disease in its progress, as the patient thinking, as he does, that it is only a slight ailment, will not present himself for treatment as often as is necessary for an intelligent management of the case. This applies to the majority of cases, but a small minority obtain better results by obeying instructions. The virulence of gonorrhœa, and consequently the length of time required for a cure, varies considerably, which fact is very often clinically demonstrated. What has been said of its virulence can equally be said of its persistence, as cases are on record where the disease has reappeared after the complete disappearance of any symptom for six years.

The Gynecological Treatment of the Insane.

Seventy-five cases are reported by Ernest Hall in the Pacific Medical Journal for April and in only four could no abnormality be found.

He considers a pelvic examination an essential part of the commitment examination and that a space in the blank should be devoted to the pelvic conditions.

Further a thorough competent gynecolo-

gist should be attached to each insane hospital as both public economy and humane interest unite in this demand.

From a study of these cases it is evident that years may elapse between the attack of physical disease and the appearance of the mental disturbance and yet they seem very dependant. This is especially noticeable in gonorrheal infections.

He concludes that education of the will is important in the prevention of insanity and this education should begin in childhood. In our schools he thinks that the accumulations of facts should be secondary to discipline.

Glaucoma.

In discussing the diagnosis of glaucoma without the use of the ophthalmoscope, M. F. Coomes, in the American Practitioner and Newsfor March 1st, calls attention to the following points as important.

Limitation of the field of vision, rainbow halo around a lamp observed in a dark room, shallowness of the anterior chamber, great intolerance of light in acute cases, the characteristic, persistent, agonizing pain, "stony hard" ball from increase of tension, perhaps nausea and a careful history of the case.

The relief afforded by an eserine solution is also of use in the diagnosis.

The affection is caused by the accumulation of blood in the choroid coat, a vasomotor disturbance of the blood vessels of the eye and the operation for its relief is an iridectomy, not necessarily wide, only sufficient to break the circle of sympathetic nerves in the iris.

Gunshot Wounds.

Some important lessons on this subject taught by the Spanish-American war are given by W. C. Borden in the New York Medical Journal for March 31st, April 7th, and 14th. Of the injuries observed 198 were due to small caliber bullets, 21 to fragments of shell, 4 to shrapnel bullets, 3 to revolver bullets, and in 4 the missile was unknown.

In concluding this paper he presents the following summary:

RELATIVE TO THE EFFECT OF THE JACKETED BULLET.

I. That perforating and penetrating wounds made by the compound bullet are usually aseptic.

II. That in non-fatal wounds it produces small shock and injury to tissues, provided no bone or important nerve vessel is involved.

III. That in bone the bullet usually comminutes the bone to a considerable extent, and that the fractures are sometimes complicated with considerable destruction of the soft parts about the bone, which in the extremities frequently produces permanent impairment of function.

IV. That wounds of exit are frequently smaller and are seldom much larger than the wounds of entrance, and are little influenced by the kind of tissue through which the bullet has passed.

V. That the lodgment of small-calibre bullets can usually be traced to long range or to ricochet of the ball.

VI. That lodged bullets seldom do immediate harm in the tissues; even sharpnel bullets, which are ordinarily supposed to be more productive of suppuration than jacketed bullets, not usually causing inflammatory trouble unless searched for and removed at the hospital.

VII. That the proportion of killed to wounded in battle has not been increased by the use of the small-calibre bullets.

RELATIVE TO SURGICAL METHODS.

I. That aseptic and antiseptic methods have been the greatest factors in reducing post-traumatic complications and the mortality of the wounded.

II. That excellent results are obtained by dressing wounds with the first-aid packet or other occlusive dressing, and by packing lacerated wounds with iodoform gauze and leaving them undisturbed until they can be attended to with aseptic precaution.

III. That bullets which remain in the tissues usually gives rise sooner or latter to symptoms of discomfort or disability, and that, in consequence, all bullets should be removed, if possible, but the removal should be deferred until aseptic conditions are available.

IV. That the Rontgen ray is of the greatest value in locating bullets and determining the condition of fractures.

V. That under asepsis there should be no hesitancy in employing operative interference in compound fractures where there is irreducible displacement of bone, or where the Rontgen ray shows a condition of fragmentation liable to produce impairment of function, and that all septic wounds and fractures should be treated by thorough antiseptic methods.

VI. That surgical asepsis is practically impossible on the field or at the field hospital.

VII. That operative interference on the field or in the field hospital should be restricted to operations imperatively demanded to save life or to decrease the probability

of death where transportation without operation would be more dangerous than the septic infection liable to occur from immediate operation under unfavorable conditions.

RELATIVE TO MEDICO-MILITARY METHODS.

I. That the transportation of the wounded to permanent base hospitals should be in every way facilitated.

II. That the establishment by the surgeon-general during the late war of numerous fully equipped general hospitals, and the speedy transportation of the wounded to and their treatment at these hospitals, was of inestimable value in promoting the application of aseptic and antiseptic methods under favorable surroundings, and so reducing the mortality and post-traumatic complications of the wounded.

It is a method which should be carried out in future wars, for it reduces the work at the field hospitals to proper bounds—i. e., primary dressings and operations of immediate necessity—and allows the application of modern surgical methods where most effective in reducing the probabilities of death and disability.

Guaiacol in Malaria

Thirteen cases of malaria in which quinine had been used without complete success and on the administration of guaiacol the results were in every way satisfactory, are reported by Chas. J. Whalen in Merck's Archives for April.

His plan was to give five to ten drops three times a day, the dose to be increased by one drop each day until twenty drops were taken at a dose. He does not bring this agent forward as a specific, but in those cases which prove intractable under quinine it is worth the trying.

Genital Tuberculosis.

A clinical and pathological report of two cases of genital tuberculosis is made by Hunter Robb in the Cleveland Medical Gazette for March.

The first was in a girl, age 18, family history tuberculous, amenorrhea, leucorrhea with dull aching pain in lower part of the abdomen.

No positive history of gonorrheal infection.

Abscess of both ovaries with chronic salpingitis was made and abdominal section performed and the tubes and ovaries removed.

On microscopical examination of tube and wall of ovarian abscess, tubercle bacilli were demonstrated in moderate numbers.

After curretting the uterus examination of the scrapings showed tubercular endometritis.

The second case was in a woman, age 25, with a slightly fluctuating tubo-ovarian mass on the left side. Abdominal section was done and as the right side was also involved, both tubes were removed.

The case looked very much like one due to specific gonorrheal infection, but the microscopical examination clearly proved its tubercular origin. Both patients made good recoveries.

Hypertrophic Pyloric Stenosis in Infancy.

Twenty-three fatal cases of hypertrophic pyloric stenosis occurring in infancy are collected and arranged in chronological order by Eric Pritchard, in the Archives of Pediatrics for April.

At the end he appends a case of his own.

He concludes from a careful study of these cases that the hypertrophy is secondary to over-action of the sphincter, and the stenosis chiefly due to spasm. That the stenosis as measured post-mortem is but an accurate gauge of its organic degree during life. That over-action and incoordinated contraction of the sphincter may be due to some fault in the nervous mechanism. That injudicious feeding, either quantitatively or qualitatively may be a contributory factor of the nervous incoordination.

Hepatic Abscess.

Mack Rogers, in the Alabama Medical and Surgical Age for April, classes hepatic abscess as traumatic or metastatic as regards the cause and this classification has the merit of simplicity at least.

In regard to treatment the free use of the aspirator needle is recommended in locating the accumulation of pus. It should be passed under local anesthesia and strict asepsis. It should be thrust in on the right side between the seventh and eighth ribs, in a line drawn vertically through the lower angle of the right scapula. If the pus is not reached at the first thrust, the needle should be partially withdrawn, till the point is just inside the chest wall, and the direction changed from time to time till the whole substance of the liver has been explored.

This failing to locate the abscess, we may make an incision or resection and anchor the organ to the chest wall by three or four sutures passed through the peritoneal covering of the liver and the margin of the wound.

If the cavity is located by the needle, it may be partially emptied and then a pair of forceps, closed, passed down the needle as a guide or a groove director passed first to pilot the forceps. Then by opening and withdrawing the forceps they lacerate their way out and cause less hemorrhage.

Both the external and internal openings in all cases coming under his observation have been too small, so that they close up before the cavity can heal from the bottom.

He recommends the bold, liberal plan of treatment if we expect to attain any degree of success in these cases.

Hydrocele.

Of the various methods of treating this condition Nicola Cerri, in the Cleveland Medical Gazette for March, thinks well of the introduction of a piece of catgut through the canula, after the evacuation of the fluid. A piece about 20 centimeters in length is used, which, by mechanical irritation, excites an adhesive inflammation before it is absorbed.

To avoid the absorption of the catgut too soon, before it has excited sufficient irritation, it may be dipped in some irritating liquid, as the perchloride of iron.

The results of this treatment are extraordinary he says, recovery is certain and the patient can attend to his business. At the worst, if the inflammatory reaction is very severe it is only necessary to remain in bed for one or two days.

If the tunica vaginalis is very thick he recommends the classical operation of Volkmann or Van Bergman.

If there is a congenital hernia complicating the hydrocele, the operation according to the method of Bassini is indicated.

Bacon and Butter.

In the days gone by consumption was entirely a thing of heredity, but later it came by bad air and contagion.

A. N. Bell, in his presidential address at the opening of the American Congress of Tuberculosis reported in the Sanitarian for May, tells us that it may be a thing of food. People who eat plenty of bacon and butter are not near so liable to contract the disease.

The exemption of the inhabitants of the arctic regions is caused by their fondness for fats of all kinds.

The author has made a careful study of this subject among the negroes, and he explains the great prevalence of consumption among them now as compared with antebellum days, as being a matter of food. As slaves they were supplied with an abun-

dance of "hog and hominy" with other meats at least once a day.

Now "hog" at least is notable by its absence from the daily fare of most of them, and no other fat has taken its place; and so consumption among them is more than twice as great.

In most cases we learn, when it is too late, that cod liver oil is good for consumption, but few have learned that food of the same character as cod liver oil, suitable for the table, is preventive of the disease.

He says that in sixty years experience he has never known a family or an individual that was brought up on a liberal supply of butter and bacon that became tuberculous.

Complicated Wounds of the Intestines.

After reporting a number of cases illustrating this condition Hal. C. Wyman, in the Physician and Surgeon for March, gives the following rules in general:

A wound of the portal vein should be treated by ligation and suture of a part of the omentum to the peritoneum, so the collateral circulation can take place. To do this the free border of the omentum is dragged into the wound made in opening the abdomen and by interrupted sutures fastened to the margins of the peritoneum.

Hemorrhage from liver wounds, if not involving large arteries, may be controlled by cautery, clamp, forceps or ligature.

An effort should be made to preserve the contents of a wounded uterus.

A temporary urinary fistula must be provided when the ureter or kidney are wounded.

Cancer of the Rectum.

A case of cancer of the rectum in a female which did well after an operation is reported by Wallace K. Oakes in the Journal of Medicine and Science for April.

The patient was 46 years of age, married and had borne children. She consulted a doctor thinking she had hemorrhoids but a thorough examination instead of the usual saline prescription saved the woman's life.

The growth was $2\frac{1}{2}$ inches from the anus and entirely encircled the rectum.

The method of operating was through the vaginal floor, beginning at a point two inches inside of the vaginal outlet the incision was carried through the perineal tissues, and the roof of the rectum divided the anal structure completely at the upper surface. The rectum was then dissected loose and cut off above the disease.

The remaining portion was pulled down and fastened to the wound. The spincter

was then carefully fitted back and the external incision closed with silk wormgut.

The patient lost very little blood and was put to bed in good condition. The wounds healed without suppuration and she soon gained almost perfect control over her bowels.

The special point is that in case of females this operation offers almost as large a field for work as Kraske's without the necessity of making a resection of bone and gives much better control of hemorrhage an account of having the parts constantly under ocular inspection,

The operation is only recommended in the early stage before involvement of the glands or infiltration of surrounding tissues.

Cancer of the Stomach in the Young.

Six cases of cancer of the stomach, in persons under thirty years of age, are reported by William Osler and Thomas McCrae in the Medical Record for April.

They state that only six cases are on record of the disease in children under ten years of age, so the condition is very rare in the very young.

In the six cases reported in this paper two features stand out very prominently—a striking abruptness of onset and the acuteness of the course.

In four out of the six the disease began with a sudden definite onset, another gave a history of only six weeks illness and might be included under the same head. In one case the enlarged liver gave the first indication of malignant disease.

The extreme duration in four cases was six months; one case was lost sight of, and the other gave a history of over eighteen months.

They agree with Mathieu's conclusions that cancer of the stomach, below the age of 30, has generally a rapid progress in some months, and often ends suddenly by incidents more or less abrupt.

That early cancer is not latent, but it is often overlooked

Deep Breathing and Tuberculosis.

According to H. H. Spiers, in the Cincinnati Lancet-Clinic for April 21st, savage people suffer from famine because they are too lazy to work, and civilized people consume too little oxygen because they work indoors so much. And so it is six of one and a half dozen of the other. The poor man can almost digest carpet tacks and goes often hungry to bed, the rich man's stomach lays down on a plate of thin soup, and for a good square meal four doctors must attend him for a week.

The perfect aeration of native tribes secures a practical immunity from lung disease. The one reason why air is not more used is because it is free. Among the upper ten it is bad form to buy things at the racket store and so they use only enough air to keep their voices going.

Let the city authorities of our great towns put in air meters and charge so much a cubic yard, and Mr. Officeman will use it to burn.

Otherwise we are afraid that tuberculosis is preferable to being caught taking liberties with fashion's prescribed way of living. Fashion you know can give the Czar of Russia spades and then beat him easy in the game of ruling women and men.

Diagnosis of Heart Diseases.

In discussing the pulse in the diagnosis of affections of the heart, Albert Abrams, in the Medical Standard for May, considers five qualities, which are detected by palpation.

Condition of the arterial wall; tension or blood pressure; volume; rhythm; frequency.

Mitral Insufficiency.—Pulse is small and feeble because the arterial system is devoid of blood.

Mitral Stenosis.—Pulse small and irregular with increased frequency.

Aortic Insufficiency.—Rapid recedence of the pulse as it strikes the finger (Corrigan's Pulse), especially if arm is elevated.

Aortic Stenosis.—On account of obstruction to the flow of blood, the left ventricle is hypertrophied, hence the pulse is one of high tension but lessened in volume.

Myocarditis.—Pulse small, soft and irregular; frequency, normal, diminished or increased.

A comparatively strong pulse, with feeble apex beat and heart tones is of great value in the diagnosis of exudative pericarditis. The strength of the right ventricle should never be gauged by the pulse, the loudness of the second pulmonic tone should be the index of its vigor.

Artificial Anus.

After a careful review of this subject, Robert F. Weir, in the Medical Record for April 21st, states that an artificial anus of a temporary character can be best established by Maydl's operation or by Bodine's modification.

Overlapping of feces should be prevented by proper spur formation, by narrowing the rectal opening, or by occluding the rectal end of the bowel, which may be fastened

in the wound or dropped into the abdomen. Continnence of the outlet is aided by muscle separation (Maydl) or by muscle bridging (von Hocker and Hartmann), or by the use of inflatable moulded plugs or other apparatus.

The opening is most satisfactorily maintained by an extra-abdominal iliac outlet, (Witzel's iliac colostomy), made by opening the bowel outside and behind the iliac spine. In this method the bowel is compressed between the edge of the bony pelvis and the skin.

Diagnosis of Small Pox.

When the physician has already made up his mind what is the matter with a patient before seeing the case, helps and aids are of no use.

But for those of us who first carefully examine before making a diagnosis the following points made by J. W. Macdonald in the Medical Dial for April may be useful.

He says that small pox must be differentiated from the following diseases: measles, meningitis, pneumonia, scarlatina, syphilis, typhoid fever and chicken-pox. He passes over all of these, except chicken-pox, which is the only point upon which differences of opinion have arisen as regards the present epidemic. Variola and varicella at one time were regarded as identical, and this belief was held by such eminent authorities as Hebra, of Vienna, and his son-in-law, Kaposi. In an epidemic of only one of these diseases there is little room for doubt; when both are epidemic in the same community the difficulty is vastly increased; and yet, the characteristics of the diseases are sufficiently distinct.

1st. The age of the patient. Small-pox occurs at any age. Chicken-pox may occur in children at the breast, is seen in increased frequency up to the fourth year, at which period it attains its maximum. It is exceedingly rare in children above 10 years of age.

2d. The onset of the disease. Small-pox is preceded by malaise, fever, backache, headache, and an eruption on the third day. The first evidence of chicken-pox is the eruption. As Whitaker puts it: "The most anxious mothers seldom notice illness of any kind until the eruption appears, and the physician is called to decipher the eruption."

3d. The location of the eruption. Small-pox appears, as a rule, first upon the forehead and extends regularly down over the face, then over the neck, chest, etc. At the same time it appears on the wrists, lastly upon the limbs. Chicken-pox, as a

rule, first makes its appearance on the back, neck and chest, or, if it comes upon the face, it spreads in an irregular manner.

4th. The character of the eruption. The vesicles of variola are deep seated and contain serum at first, and, later, pus. The vesicles of varicella are superficial and contain only serum. The small-pox eruption is nearly uniform in size. That of chicken-pox is very variable. The eruption of small pox is most abundant upon the face and fingers. The eruption of varicella may be most abundant over any part of the body.

5th. The appearance of the fever. In variola fever, more or less intense, precedes the eruption by about three days, and then falls with it. In varicella the fever occurs only when the eruption is on, and increases with its development. A secondary fever occurs in many cases of small-pox, no secondary fever attends varicella,

6th. The mortality. In small-pox the mortality varies from two to fifty per cent. In chicken-pox the mortality is nil.

If after a most careful examination the physician is still uncertain of his diagnosis, the possibility of allowing so terrible a disease as small-pox to get beyond control should lead him to give the public the benefit of the doubt and place the case under the most rigid quarantine.

Copper Arsenite and Nuclein Solution in Typhoid Fever.

It is claimed by John Aulde that the disease can be brought to a favorable termination within a period ranging from three to five days by the use of copper arsenite and nuclein solution.

According to J. C. Wilson, in the Pennsylvania Medical Journal for April, this method was given a trial in his service at the German Hospital.

The remedies were given according to the directions of the originator in ten cases with the following results.

In three cases the temperature reached normal on the 11th, 14th and 15th days, respectively; the other seven on the 19th, 22d, 23d, 24th, 33d, 36th and 39th days of the disease. The average duration of the ten cases being 21.7 days. Three died, a mortality rate of nearly 30 per cent.

Prof. Wilson concludes that this series of cases, brief as it is, shows conclusively that Dr. Aulde's confident prediction that enteric fever under treatment by nuclein and copper arsenite can be brought to a favorable termination within a period ranging from three to five days is absolutely without support in fact. The unsatisfactory

course of all the cases submitted to the treatment except three, the high mortality and the general unfavorable impression made by the cases thus treated, as compared with the bath cases, precluded further clinical studies in the matter.

Pernicious Anemia.

This condition is often very hard to differentiate from malignant disease of the stomach as is brought out in two cases reported by Albert Abrams in the Medical Record for April 28th.

As a result of this experience he is a great believer in arsenic in the treatment of this condition.

He says that arsenic is a true specific in pernicious anæmia, and is as certain in its immediate results as is mercury in syphilis, quinine in malaria, or iron in chlorosis. The specificity of arsenic is so great that in no case of grave anæmia are we justified in excluding the progressive pernicious variety even though the blood examination is negative, without a heroic trial of arsenic. Like the other specifics, it produces relative cures and cannot be regarded as a prophylactic owing to the frequent relapses which occur. It may be given as Fowler's solution, beginning with three-minim doses well diluted after each meal, and increased by one or two minims daily according to the urgency of the case, until twenty-five or thirty minims are taken three times a day. A safer rule is to push it to the point of toleration and maintain it at this point until the blood examination shows the result desired. The appearance of its physiological effects (œdema and itching of the eyelids, gastro-intestinal irritation, etc.) is a signal for its temporary discontinuance. When arsenic cannot be given by the stomach, it may be administered subcutaneously or even by the rectum.

In association with arsenic, assimilable food and rest are indispensable adjuvants.

The use of intestinal antiseptics in this as well as in other diseases is a mere therapeutic refinement not sanctioned by bacteriological reasons, and they ought, therefore, not to be employed as a routine measure. In the Italian literature one finds some authentic evidence of the good effects from thymol, its administration being suggested by the theory that pernicious anæmia is caused by intestinal absorption of products which are destructive to the red blood corpuscles.

Iron is not only useless but is apt to create digestive disturbances.

Bone-marrow is said to be curative, but

it induces nausea and aggravates existing gastro-intestinal troubles.

Gastric disturbances suggest stomach lavage. The character of the food ingested must be determined by the results of a chemical analysis of the stomach contents.

To counteract the great reduction in the quantity of blood (oligæmia) weak saline solutions may be given by the colon (enteroclysis) or preferably in the subcutaneous tissue (hypodermoclysis).

Relapses are best prevented by minute attention to dietetic and hygienic details.

Fibroma Complicated by Pregnancy.

We are often at a loss to know just what to do in cases of pelvic tumors complicated by pregnancy and maybe we do nothing except hope for the safe termination of the complication, when we propose to do something great according to the method of von Somebody. And likely the mother and child are both lost while we are waiting to do our big operation.

H. Delageniere, in the *Annals of Gynecology and Pediatrics* for April, gives some operative indications in such cases.

The induction of abortion or premature labor is not followed by good results.

Operation on the fibroma alone is best in certain cases, as polyp springing from cervix, or where pedunculated at the fundus of the uterus.

If the tumor is sessile or implanted broadly, the danger to mother and fetus is much increased.

Intraligamentary fibromas may be removed early in the pregnancy, but very difficult in the latter months.

Operations on the uterus have in view the delivery of the child and the removal of the uterus. If the child is viable a cesarean section and hysterectomy, if not then a simple hysterectomy.

In many cases we may watch and wait, but always on the lookout for symptoms.

Among the indications for operation, he mentions, in the order of frequency, pains, compression of the ureters and the bladder or the rectum. These latter being absolute indications for surgical interference.

Fractures of the Ankle and Elbow.

The usual fracture is disappointing enough at best, but when we come to treat them in the neighborhood of the elbow or ankle it is very likely to result in a living advertisement of our lack of skill.

A. J. Ochsner, in the *American Journal of Surgery* for April, gives some practi-

cal rules for securing the best results in these cases.

In fractures about the ankle joint, whatever other precautions may be taken in the treatment, always place the foot at a little less than a right angle. In case of painful joint following Potts' fracture, the foot should be fixed for a period of six weeks at a little less than a right angle, the patient being permitted to walk without the use of a crutch.

In fracture about the elbow joint, especially in children, no matter how treated, there is a tendency to at least partial ankylosis.

For this he recommends a good-sized wheebarrow for the child to play with and as he must use both hands the ankylosis is gradually lessened.

When there is limitation of flexion so that the patient cannot reach his mouth or head, he flexes the arm so the fingers will touch the acromion process, then places a piece of rubber adhesive plaster about two feet in length and two inches wide over the dorsal surface of the hand and arm, over the acromion process and back over the posterior surface of the shoulder. A plaster is applied over the outer surface of the limb so as to make a kind of trough splint.

When this has hardened sufficiently the rubber adhesive is cut. After two or three weeks the cast is removed during the daytime and replaced at night.

By observing these practical points in a number of cases, his results have always been rapid, the treatment pleasant and the function surprisingly satisfactory.

Isolation and Hospital Care for Poor Consumptives.

J. C. Wilson, in the *Journal of Tuberculosis* for April, makes a strong plea in behalf of the poor consumptives, calling attention to the necessity for isolation and hospital care for them.

Among well-to-do the danger of allowing the patient to take care of himself is slight as education, refinement and decent ways of living are a safeguard. Such people can avail themselves of travel and health resorts, they can be under the constant care of competent medical men. But in the poor consumptive all these things are lacking, and it is only the daily struggle to the end with disaster not only to himself but danger to those about him. He says that the establishment of special sanitariums to which the incipient cases can be sent and special hospitals for the advanced cases is the solution of the problem.

Intestinal Antisepsis in Typhoid Fever.

The season for the annual discussion on the treatment of typhoid fever is close at hand and we may expect the current literature from now until December to be filled with such names as Woodbridge, salol, Osler, calomel, cold water, salts, turpentine, opium and silver, and such like.

The International Medical Magazine for April leads off with a symposium on this very reasonable subject. The opening article is by James M. Anders, who says that intestinal antiseptics are valuable in this condition, but they are by no means a specific, as he considers the disease one of the general system and not altogether confined to the intestinal canal.

The Woodbridge treatment he gives a black eye in passing and in fact only mentions it to condemn it as illogical and unscientific, which it undoubtedly is beyond any peradventure.

He recommends intestinal antiseptics for a rational purpose that is to control in some measure the meteorism which is often due to some undigested matter in the canal and in such cases a laxative will have a good effect. Salol he has used for a number of years with good results.

Intestinal irrigation is recommended in appropriate cases as where the ulcerative process is in the colon as well as in the small intestine.

Obstetric Aphorisms.

C. A. Van Ramdohr in Post Graduate for April has the following aphorism for the obstetrician's guidance and compact enough to be easily remembered.

1. Never rupture membrane unless you are prepared to finish delivery at once, if necessary, or unless you intend to confine the patient artificially within a limited period of time.

2. External measurement of pelvis has to be practised to yield trustworthy results.

3. The external (Baudelocque's) diameter is never reliable.

4. The distance between the crests should be about an inch greater than the distance between the spines. Equal distances or a larger inter-spine indicate a deformed pelvis.

5. Contraction at the outlet is extremely rare, and if it occurs, is usually the result of an ankylosed coccyx.

6. If the index finger can touch the promontory there is always a reduced conjugate diameter.

7. If, on the introduction of two fingers, the middle one does not reach the promon-

tory, the conjugate is normal or more than normal.

8. Whenever the whole hand can be passed through the superior strait, there is a possibility of withdrawing the child through the natural passages.

9. If the hand cannot be passed, there is an absolute indication for Cesarean section.

Ocular Complications of Variola.

Before the introduction of vaccination, 35 per cent. of all blindness in France was due to smallpox, says Geo. F. Keiper in the Medical and Surgical Monitor for April, after vaccination only 7 per cent. In Prussia before compulsory vaccination was introduced, 35 per cent of all blindness was due to smallpox; after its introduction 2 per cent.

In the United States about 1.41 per cent of all blindness is due to this disease.

According to the table of Landesburg, 57 per cent. of cases of variola have disease of the conjunctiva, 5.56 per cent. have disease of the lachrymal apparatus, 30 per cent. have disease of the cornea and is about 3 per cent. the iris if affected.

Pustules appear on the skin of the eyelids in 20 per cent. of all cases.

Careful attention to the condition of the eyes in all cases of smallpox is evidently a plain duty of the physician in charge.

Perhaps in many cases the treatment does not consider the details of the management at all and we are so concerned about the possible spread of the disease that we do not pause to take up all the little points in connection with the patient himself.

Latency or Cure of Pulmonary Tuberculosis.

We are reminded of the difficulty in some cases of saying whether the patient is cured or whether the disease is only latent, by Karl von Ruck, in the Journal of Tuberculosis for April.

For example, the patient has lost his cough and expectoration, no marked disturbance in the body temperature, the lost weight has been regained and he feels a satisfactory degree of strength and well being. Most patients are willing to accept such results as a cure and the physician may be satisfied with the result of his treatment, but the case may be far from entirely well. In all such cases where there is a doubt as to whether the patient is cured or the disease is only latent for the time being, he uses the tuberculin test with positive results as borne out by the subsequent history of the case.

Harris' Urine Separator.

To catheterize the ureters in the male is out of the question with most of us, and to get around this impossibility a urine separator will be valuable in kidney disease.

As described by H. F. Harris, in the Medical Age for April 10th, the instrument consists simply of a lever which is introduced into the rectum, and a double catheter. The beak of the lever, when clamped to a fork on the catheter, elevates the base of the bladder in the median line and thus two lateral pouches are formed, into each of which empties one of the ureters. The catheters, being introduced and rotated, drains each pouch separately into bottles which have been made partial vacuums.

The urethral part of the instrument is the size of a No. 25 catheter, French scale and of course can only be used where the urethra will admit a probe of this size.

Electricity in Chronic Rheumatism.

According to William J. Morton, in the Medical Record for April 21st, electricity is a valuable therapeutic agent in the treatment of chronic rheumatism. He uses the high potential, high frequency current, in one of its forms and claims that it affects both the local and the general metabolism, or metritrional exchanges.

The current is obtained from a powerful influence machine, either the static induced current or the electric wave current. By the latter the patient's entire person is subjected to the influence of powerful condenser waves.

His convictions as to the efficacy of this treatment are based upon dispensary practice, in which no medicines were added to the electricity.

Intussusception in a Child of Seven Months.

A case of this kind, in which operation was followed by recovery, is reported by F. S. Clark and F. E. Bunts in the Cleveland Journal of Medicine for April.

The operation was done 24 hours after the diagnosis was made, and about seven inches of gut was invaginated of the ileocecal variety. During the manipulation of the intestines the little patient became very weak, but rallied all right after the operation.

The question of feeding afterwards was very important. The first 24 hours albumen water was given freely and with no vomiting. Beginning the second day calomel was given, causing the passage of gas and motion of the bowels.

After this they gave cream, sugar and

water, 4 per cent. fat, 6.5 per cent. sugar. Three weeks after the operation it was apparently well.

A short while after it was taken with colic, rapid pulse, some temperature above the normal, and vomiting of clear mucus.

In twenty-four hours the child was dead, and on autopsy the intestine was found obstructed by a band of adhesion.

Operation was not admissable in the last attack on account of the early extreme prostration.

Injuries of the Nerves Due to Fracture.

Charles G. Cumston, in Pediatrics for April 1st, relates a case of paralysis of the median nerve following fracture of the humerus just above the condyles.

The fracture was reduced soon after the injury, put up in splint and healed all right except that the hand of that side remained practically powerless,

On operation it was found that the nerve was pressed upon by callus which was chiseled away. The function of the hand slowly returned until eleven weeks after the operation the motor functions were nearly perfect.

He concludes that these nerve injuries due to fracture have a most favorable prognosis provided an operation is done for their relief as soon as the diagnosis is made.

The Prognosis of Brain Syphilis.

Correct prognosis waits on accurate diagnosis, says Charles J. Aldrich, in the Cleveland Medical Gazette for April, and by diagnosis he does not mean a simple naming of the disease, but taking in with a wide grasp the character, progress, location and extent of the disease, giving at the same time due weight to the personal factor.

The general laws of prognosis in acute brain disease holds good in acute specific lesions to a limited extent only and the reason for this lies in the fact that the phenomena produced by brain syphilis are so capricious, variable and often incomplete as to constitute a distinct class.

Since we have the results of an infection to deal with that has little tendency to self-limitation, it must follow that both brain and cord lesions have a great tendency to relapse.

Age, sex, social status, alcoholism, cachexia, and sexual excesses all have vital prognostic importance.

Youth is favorable and women are less liable to diseases of the middle cerebral arteries and therefore less liable to fatal results.

A life laden with syphilis and given to excesses of any kind is always in danger. *Alcohol and syphilis are the twin devils of pathology*, which neither fleetfooted mercury can overtake nor iodine exorcise.

Syphilis of the nervous system as a pathological process differs in no way from syphilis elsewhere except as influenced by its histological environments. Syphilis apoplexies are seldom rapidly fatal and are less liable to be followed by permanent injury.

The lesion of the nervous system produced by syphilis in the secondary or blood stage of the disease are far more remedial than the late lesions.

To the specific endarteritis, we must look for the principal cause of syphilis of the large ganglia.

In syphilis of the convexity and in the localized seizures which are usually termed Jacksonian epilepsy, the prognosis is usually good.

Inoculation with the Malarial Parasite.

A case of probable accidental inoculation with the malarial parasite is reported by William H Katzenbach in the Medical News for April 21st.

On September 18th a surgeon performed a vaginal hysterectomy on a patient from a malarious district and during the operation he pricked his fingers several times with the needle he was using.

The patient had chills some time before the operation, but they yielded readily to quinine.

About two weeks after the operation the surgeon had a chill at noon, lasting for half an hour, which was followed by one every day for awhile. Examination of the blood showed the malarial parasite in abundance of the estivo-autumnal variety. The surgeon had been a resident of New York for twenty years and this form of parasite is not found in the blood of patients infected in the ordinary way in the vicinity of Manhattan.

Nephritis of Malaria in Childhood.

After reviewing the literature of nephritis of childhood in general, Moncorvo, in Pediatrics for April 15th, says that in 35 cases of acute nephritis in young subjects, recently seen, 26 coexisted with malaria. The diagnosis of malaria was confirmed by an examination of the blood.

Calomel, quinine and milk diet was the basis of the treatment followed with good results.

He endorses the position of Hutinel who thinks it possible that the action of the mi-

croorganism of Laveran on the kidneys is purely and simply a local one, which may be ascribed either to the pressure of the protozoon in the vessels of the glomeruli or to its contact with the cellular elements. It is also possible that this action is exerted through the medium of the blood, the alterations in which are undoubted.

Nephroureterectomy.

A case is reported by George H. Noble, in the American Journal of Obstetrics for April, in which he removed the kidney and ureter in one mass through an opening barely large enough to admit the hand.

The patient was a female and the posterior vaginal vault was opened and the ureter tied close to the bladder.

The case had developed a large, extra peritoneal abscess which was opened and drained, but a sinus persisted leading to the kidney which was cystic and the ureter tubercular, so the whole was removed in one piece.

The kidney was the largest, (16 centimeters), and the ureter perhaps the longest (31 centimeters) ever removed together.

This is the fifth nephroureterectomy and the second case done by the extraperitoneal vaginal method, and the only one of these two which the ureter and kidney were removed in one piece.

Of the five operations, McKosh had one Morris one, Kelley 2, Noble one.

Syphilis.

In the Medical Standard for May, William S. Gotthiel begins a series of articles on syphilis.

Historically this disease can not be certainly traced back farther than the closing years of the 15th Century but soon spread rapidly throughout the civilized world.

The type has gradually changed, severe forms have become less frequent and mild types prevail more and more.

No betterment of treatment is responsible for this change in type, as our remedies today are the same as those employed 300 years ago.

He thinks it is due to the "syphilization" of mankind, our blood strains are all more or less infected and protected, and our tissues have gradually become less and less suitable for the luxuriant growth of the organism. But in virgin soil it is still capable of terrible ravages.

He further discusses the general history of the disease, the virus and its transmission, primary syphilis and the chancre.

A number of excellent cuts illustrate the different kinds of chancres.

Treatment of Epilepsy at Craig Colony.

According to the Superintendent, Wm. F. Spratling, in the Medical Standard, the colonizing of the patient means that he is placed under such restriction that we can at all times have entire control of his acts. This is most essential, for the nature of his disease causes him too frequently to disregard the laws of health and indulge in many dissipation.

We treat him as an individual at first, along broad hygienic lines, for many come to us in poor general health, and the first demand is that they be built up, reconstructed physically.

To do this we employ a diversity of means: Medicines, systematic occupation, gymnastic exercises, baths, special feeding, and the use of such moral agencies as may be essential.

All the while he is being studied for aura; for the presence in the blood, urine, or other secretions, of noxious substances that may cause or help to cause the disease.

He must eat only such food and only in the manner prescribed for him. We regard this as most essential.

He must not overeat, for by tradition founded on fact he is apt to gormandize; and if he is habituated to the excessive use of tobacco he should be cautioned to be moderate in its use.

He is not permitted to use alcoholic stimulants in any form or to any extent. Tea or coffee, if properly made for him, he may take in moderation without harm; but it is seldom properly made for him.

At the colony every epileptic received is made to undergo a complete change of life. If he was of sedentary habits he is put out in the fields, under the sun and in the air—not abruptly, but gradually. His entire life, as far as can be, is thrown into new channels. If, when received, he is feeble, as many of them are who have suffered from long neglect (and I am speaking of the indigent classes), he is put into the hospital, fed on light nutritious foods, and every effort made to build him up.

If we see at any time that he fails easily under any mental strain, such as study or close reading, he is made to quit such pursuits and to use his body only.

If his body is big and strong and he is weak intellectually, then the opposite course is pursued, the object always being the co-equal development of the mind and body—no vitiation of one at the expense of the other.

If he has any natural bent or inclination in the way of study or work, it is recog-

nized and encouraged, for mental occupation in the treatment.

Due heed to the foregoing over a sufficient time will, as we have learned from experience, cure from six to eight per cent. of all cases that come under our care.

Splenic Anemia.

The original department of the Boston Medical and Surgical Journal for April 26 is taken up with the consideration of splenic anemia by several writers.

R. C. Cabot gives a historical sketch of splenic pseudoleukemia in which he says that the first systematic treatment of this subject was given by Banti in 1882, though attention had been called to it by H. C. Wood in 1871.

In the diagnosis of the disease we have to distinguish: Cases of idiopathic splenic enlargement without any anemia or any other symptoms which are not very uncommon; pernicious anemia, in which a slight enlargement of the spleen is almost always present, and sometimes a very considerable one; cirrhosis of the liver; splenic tumor associated with chronic malarial poisoning; leukemia; the anemias of children.

The prognosis varies according to the different writers. Some of Osler's cases lasted twelve years or more and were still in good health.

Splenectomy he considers reasonable treatment in certain cases.

Salol in Yellow Fever.

Surgeon Nunez has great faith in the efficacy of salol in the treatment of yellow fever. He claims that it acts as an antiseptic, rendering the stools absolutely odorless, that it calms the irritation of the stomach and bowels and thereby reduces the temperature, for the kidney he gives cream of tartar which also serves to keep the bowels open.

Bat Smith, in the Texas Medical Journal for April, says that he has watched the effect of this treatment very closely in the yellow fever hospital at Santiago, and he comes to the conclusion that it is not much good.

He bases his objection on the fact that salol is split up in the body into salicylic acid and carbolic acid and the latter is very injurious where there is any active inflammation of the kidneys as is found in severe cases of yellow fever. He admits that many cases have recovered under the Nunez plan of treatment, but contends that they were mild cases and would likely have gotten well without any treatment at all.

Mucous Colic.

A case of intestinal catarrh of 20 years standing, in a woman 60 years of age, is reported by H. B. Forbes in the *Denver Medical Times* for April.

She suffered from attacks of cramps at intervals with bloody mucous stools.

Mucous casts of the bowels were passed during these attacks.

The patient was of slender stature, rather poorly nourished and of evident neurotic temperament.

She was placed on a free milk diet, bismuth, salol and morphine. When the diarrhoea was checked the above was substituted by 12 drop doses of tincture of nux vomica.

The duration of the attack under this treatment was much shorter than usual.

She still passes some casts, but enjoys fairly good health.

Operation for Typhoid Perforation.

A case of perforated typhoid ulcer operated on 18 hours after perforation is reported by William E. Lower in the *Cleveland Medical Gazette* for April.

The perforation occurred at the beginning of the fourth week at 3:15 P. M., and the operation was done the following morning at 9:15. The patient was anesthetized and the abdomen opened by a three-fourths of an inch incision to the right of the median line. Considerable fecal matter was found in the peritoneal cavity.

About 14 inches from the ileocecal valve the perforation was found which was about the size of a goosequill. It was turned in and silk Lembert sutures used. Six hours after the operation the pulse was 120 and the respiration 28; at the end of twelve hours the pulse was 118 and of good volume. The patient died 60 hours after the operation of sepsis.

An earlier operation might have saved this case.

Prolapse of the Uterus.

John B. Deaver, in the *American Journal of Obstetrics* for April, makes some very practical remarks in regard to the operative treatment of this condition.

He calls the hypertrophic form false prolapse, and says that unless it is causing marked symptoms it had better be left alone.

The simple or true may be one of three varieties, according to the degree of prolapse; first, slight downward displacement; second, where the cervix approaches within one or two inches of the vaginal outlet; third, where the cervix, and frequently the

entire uterus carrying the bladder and rectum, protrudes through the vaginal orifice.

In the severer forms usually three indications are to be met: the vaginal canal and vulvar outlet must be restored to its normal condition, the enlarged or subinvolved uterus corrected, and the uterine supports applied from above.

The Emmet operation is best for restoration of the pelvic floor, then repair of the cervix and curettment for subinvolution and ventrofixation above.

In the third variety, where the prolapse is complete, an anterior or posterior colporrhaphy or both may be necessary in addition.

Special Treatment of Certain Diseases of the Eye.

The successful treatment of three important cases of the eyes by the combined method of mercury and iodide of potassium internally and pilocarpine hypodermically is reported by G. Herbert Burnham, in the *Canadian Practitioner and Review* for April. One was a cyclo-iritis of both eyes, of long duration, with the other changes in the eyes usually associated with continuance of this disease; a second of iritis of both eyes, with typical diffuse scleroderma; and a third of complete paralysis of the left third nerve, from acquired specific disease.

In all of these cases the result was all that could be desired from any plan of treatment. Under this treatment there are no relapses, even in those cases in which under the forms of treatment previously used they have recurred frequently and severely. In severe cases it is of course necessary to give the treatment for some time.

He says that even in old cases of iritis he uses this treatment instead of doing an iridectomy with far better results. This plan of treatment is applicable to nonsyphilitic as well as syphilitic affections with equally good results.

The Radical Treatment of Follicular Tonsillitis.

As the cause of infection in these cases may be traced directly to the tonsillar crypts with their contents of food detritus, micro-organisms and pus, M. A. Goldstein, in the *Laryngoscope* for April, says that the speediest means of arresting the disease is to remove the cause by complete evacuation and cleansing of these follicles.

For this purpose he uses two specially constructed instruments, a slender tonsil scoop and applicator.

After each follicle is cleaned out with the scoop, a small tuft of cotton saturated with

pure guaiacol is introduced with the applicator.

A gargle of one dram of tincture of iron to an ounce of glycerine, completes the local treatment.

In general give a brisk saline purge, pilocarpine hydrochlorate, and sodium benzoate and sodium salicylate to saturation.

Rachitis.

Some are inclined to doubt the prevalence of this disease except among the very poor.

Frank P. Earle in the Chicago Clinic for April says that the age for this disease is from six months to two years. Males and females are alike affected and the disease is confined to the temperate zone. The question of heredity is in dispute but Holt states that it is apt to occur with parents of a syphilitic or alcoholic diathesis.

In this country it is most frequent in Italians and negroes. Tuberculosis is rather a result than a cause.

Syphilis has perhaps little bearing but deficient food, bad hygiene, dampness and squalor are powerful abettors though not the real cause of the disease.

The real cause is malassimilation or foods deficient in fats and proteids.

As to treatment he recommends, cream and butter, lime either as limewater or the lactophosphate, phosphorus, cod liver oil, iron, arsenic and strychnia, cod liver oil he considers nearer a specific than anything else he has tried.

In advanced cases where the deformity is marked they must be referred to a surgeon.

The Treatment of Croupous Pneumonia.

W. G. Ewing, in the Medical and Surgical Bulletin for March, gives his plan of treatment for this condition.

Dover's powder for the pain, with strapping and proper position.

He does not consider high fever as especially dangerous unless long continued. When necessary he uses cold applications locally.

For the cardiac depression, alcohol, strychnine and digitalis. Strong, black, hot coffee is also recommended as a good stimulant.

For the restlessness which may develop into sleeplessness and delirium he uses cold sponging to the head with a hot mustard bath to the feet. *Veratrum viride* he considers better than bleeding when this is indicated.

Pneumonia cannot be aborted and the cases in which it is supposed to have been cut short, to six, five or four days, by this or that line of treatment can be matched

by other cases of equally short duration, without the use of the so-called abortive measures.

The heavy doses of calomel recommended by some he thinks injurious, though in dose sufficient to clear out the alimentary tract at the commencement of an attack, its use is admissible.

Urticaria.

Several varieties of this disease are mentioned by David Walsh in Gaillard's Medical Journal for April.

He states that the treatment may tax all the resources of the physician, and in all cases we should search diligently for the cause.

Disorders of digestion, certain articles of diet, certain drugs, the underclothing, cold and other things may be at the bottom of the attack. So the treatment may vary from salines to curretting the uterus.

Atropine subcutaneously in 1-100 grain doses, cautiously increased is worth a trial.

Locally warm alkaline baths are useful.

In general, antiseptic, astringent and evaporant lotions and baths are preferable to ointments.

The Use of the Angiotribe.

After using the instruments of Thumin and Bissell, J. Riddle Goffe, in the Boston Medical and Surgical Journal for April 12th, says that he prefers the angiotribe of Tuffier to either of the others. He used it in sixteen gynecological cases with the very best results.

He claims the following advantages:

The superiority of this method of controlling the blood vessels over the former of applying forceps becomes apparent at once. By the former method forceps had to be left in place as they were applied, one after the other, in the progress of the operation. These filled the vagina more or less and impeded the progress of work. In the use of the angiotribe, on the contrary, more and more room is gained with each application.

The handles of the forceps protruding from the vagina were a great source of annoyance and discomfort to the patient. Moreover, the forceps had to be removed at the end of thirty-six to forty-eight hours. This was a great annoyance to the patient, and in a certain proportion of cases hemorrhage occurred from the tissue adhering to the forceps and being torn away as they were withdrawn. After the use of the angiotribe none of these disturbances arise; convalescence is smooth and comfortable. Indeed, his experience is that there is very

much less pain after using the angiotribe than by either the old forceps application or in the use of ligatures.

It is superior to ligatures in two respects : it is more easily and quickly applied and it is attended by less discharge during convalescence, whether the ligature used is catgut or silk.

In his opinion, the angiotribe has a field of application in dealing with hemorrhoids, and while he has had no actual experience in this line of work, he believes it will prove to be superior to the ordinary clamp and cautery.

Tertiary Syphilis.

Three cases of this form of syphilis are reported by John V. Shoemaker in the Medical Bulletin for April.

The first was a woman, 53 years of age, with tubercular syphilide on the left side of the chest, which resembled herpes zoster.

She was put upon mercury with chalk on account of the weakness of her digestive organs, three grains four times daily. Locally the following ointment was ordered :

Ung. hydrarg. nitr., 3ss.

Acetanilid, gr. x.

Ung. zinci oxid, venzoat, 3ss.

The amount of acetanilid to be gradually increased to 20 grains.

The second case was a man, 30 years of age, who had the pustulocrustaceous form of skin syphilis upon the cheeks and neck. He had a chancre five months before. He was given

Potass. iodid, 3ss.

Syr. sarsaparilla co., 3vi.

Dessertspoonful four times a day.

The third case was a woman, 38 years of age, with a well marked lesion upon the forehead and another on the right side of the chest. This was a typical case of rupia and she was given 15 grains of potassium iodide four times daily. Externally an ointment containing 10 grains of calomel and 15 grains of carbolic acid to an ounce of oxide of zinc ointment.

Restoration of the Base of the Bladder and Urethra.

A case is reported in the Post-Graduate for April, by Bache McE. Emmet, in which he restored the base of the bladder and urethra by plastic surgery.

Following instrumental delivery the vaginal vault was destroyed, carrying the base of the bladder and the urethra entire.

This was remedied by using the posterior wall of the vagina which necessitated the temporary closure of the vagina.

The time of treatment covered about one year, but the result was satisfactory in every way.

Pathology and Treatment of Typhoid Fever.

That typhoid fever is a specific disease has not yet been fully proven, according to George Dock in the Physician and Surgeon for March.

Neither the results of bacterial cultures nor the Widal test are at present sufficient to establish this fact. He calls attention to the fact that it is not a local disease, but a general one. From this he knocks the props from under the specific intestinal treatment of this condition. Of course antiseptics do good, but he is inclined to believe that simple cathartics will accomplish all that should be expected from intestinal medication. The germs are in the system and it would be as sensible to try to kill them by pouring antiseptics on the patient's hands as to attempt it by the lumen of the bowel.

The infection takes place usually in the lymphoid tissue of the ileum, then the mesenteric glands, spleen, gall bladder, liver, blood and kidneys.

The value of the cold bath in the treatment is indisputable, not for its antipyretic effect but for its stimulant effect on nutrition, secretion and excretion, the nervous system and, only incidentally, the temperature is reduced. One very good effect of the bath is its diuretic effect, because the intoxication is more important than the high temperature. Not only is more water excreted, but the total solids are distinctly increased.

He advocates more liberal diet than milk but cautions us to watch the stools, temperature and the patient closely.

As for medicines he uses none except for special symptoms. For stimulants he uses coffee and strychnia, depending on the urgency. Alcohol as a routine drug has been entirely abandoned, the doses before and after the bath being entirely unnecessary. Hot milk internally or hot water bags externally more than replace the spirits.

Etiology of Malarial Fever.

William S. Thayer read a paper on this subject before the Congress of American Physicians and Surgeons, reported in the Medical News for May 5th.

He was of the opinion that the disease was acquired through the gastro-intestinal tract, especially by drinking water; through inhaled air; and by the bite of insects. The experiments of Celli, Marino, Zeri, Grassi and Filetti were strong evidence

against the idea that the disease might be acquired through the gastro-intestinal tract; while a careful study of the literature as well set forth by Norton revealed the utter lack of evidence in support of such an idea. With regard to the theory that the disease was acquired by inhaled air, it could only be said that while such general facts spoke in its favor, no positive evidence in its support had ever been adduced. That the disease might be acquired through the bites of insects, especially of mosquitoes, had become an attractive hypothesis. It then may be considered as proven, that the malarial parasite possesses an extra-corporeal cycle, which is completed in the stomach wall of mosquitoes of the genus *Anopheles*, and that members of the genus *Anopheles* are capable of transmitting malarial from infected to non-infected individuals. The author then went over the bites of insects indigenous to certain localities in relation to the pathological effects, and especially referred to the cases of mosquitoes which infect the suburbs of Baltimore.

Hour-Glass Contraction of the Stomach.

F. S. Watson, before the American Surgical Association, reported in the Medical News for May 5th, said that this lesion has a surgical history of only ten years—and the principle of anastomosing the two portions of the stomach was first carried out by Wolfer in 1894. Since then anastomosis has been carried out in one form or another many times. Altogether thirty-five operations upon an hour-glass stomach have been published. The speaker described a case on which he had successfully operated. His plan was to suture together the parts to be anastomosed, before the stomach was opened. Communicating incisions were then made, which of necessity exactly coincided, and were sutured internally. The extra incision in the stomach was then closed. The choice of method must depend on the conditions found. In some instances gastro-anastomosis is not practicable because it would bring too great a tension on the parts. Gastro-enterostomy fails to utilize the digestive capabilities of the pyloric half of the stomach, and if the cardiac portion of the stomach is atrophied, this loss of the pyloric portion will be serious—a plastic operation is in many cases technically inadvisable while a resection of the constricted portion is too dangerous for practical use. Whatever operation is chosen the surgeon should not forget the advantage of freeing adhesions—as this of itself has been known to cure many annoying symptoms.

Diagnosis of Malarial Fever.

Albert Waldert in Medicine for May gives in detail the method of examining the blood in the diagnosis of malarial fever. The necessary apparatus consists of a one-twelfth oil immersion lens and warm stage, large clear cover glasses and slides.

The cover glass and slide should be thoroughly cleaned with alcohol and wiped dry without touching them with the bare fingers. The lobe of the ear or end of finger from which the blood is to be taken should also be perfectly clean.

The warm stage should be so adjusted as to keep the specimen at 98.2 F., too great heat or cold will crenate the corpuscles.

Do not take the first drop of blood but allow several to escape, then touch the summit of a drop with the coverglass in the blades of the forceps without touching the skin.

The blood should spread out smoothly as the coverglass is allowed to fall by its own weight on to the slide. If it does not do so there in some fault in the technique and a new specimen must be selected. It is time wasted to try to examine a bad specimen.

The microscope should be taken to the bedside of the patient and the specimen examined immediately after it has been withdrawn from the circulation.

Several specimens should be collected at different periods of the fever, because the parasites are not always found. During the period of apyrexia they may be absent from the peripheral circulation.

As a rule only a limited number of malarial parasites are discovered in each specimen of blood obtained, and frequently ten to fifteen minutes must be consumed before one good specimen is found.

The small hyalin segmenting bodies are seldom found free in the plasma. As soon as sporulation occurs they *at once* enter the red corpuscles.

It should be remembered that the plasmodium malariae has a turning, twisting, rotary, or flattening-out movement, and in the later stages containing fine pigment granules in active motion.

As the specimen of blood becomes cold, the movements of the organism become slower and slower, and finally cease altogether.

It is very common to meet with foreign material and "blood dust" in the plasma, which at times may be mistaken for the non-pigmented hyalin parasites of malarial fever. The bodies may have an active Brownian movement.

In beginning this study one should confine his attention to the parasites within the red

cells. In looking for the tertian parasite any enlarged and decolorized red corpuscle should at once arrest the attention.

If there be a double or triple infection, the organisms will be of different sizes.

Except in the estivo-autumnal type of fever a few doses of quinine will cause all organisms to disappear from the blood.

Medical School of the Future.

The medical student is coming in for his share of attention in this progressive time.

H. P. Bowditch, in his presidential address before the Congress of American Physicians and Surgeons, reported in the Medical News for May 5th, says that the medical schools of the first rank will, in the near future, be organized and administered as follows:

It will be connected with a University, but will be so far independent of university control that the faculty will practically decide all questions relating to methods of instruction and the personnel of the teaching body.

It will offer advanced instruction in every department of medicine and will therefore necessarily adopt the elective system of some sort, since the amount of instruction provided will be far more than any one student can follow.

The laboratory method of instruction will be greatly extended and students will be trained to get their knowledge, as far as possible, by the direct study of nature, but the didactic lecture, though reduced in importance, will not be displaced from its position as an educational agency.

The work of students will probably be so arranged that their attention will be concentrated upon one principal subject at a time and these subjects will follow each other in a natural order.

Examinations will be so conducted as to afford a test of both the faithfulness with which a student performs his daily work and of his permanent acquisition of medical knowledge fitting him to practice his profession.

Nephropexy.

This method of kidney fixation without sutures is described by Nicholas Senn in the Medical Standard for May.

The following is a stenographic report of the clinic at which the patient was exhibited.

We performed a fixation of the kidney without suturing, i. e., nephropexy, a procedure with which we have become amply familiar during the last two semesters. The

kidney can be anchored safely and permanently, without subjecting it to the least possible injury with suturing. We performed this operation, first making a long Semon incision, cutting down upon the adipose capsule of the kidney and freely excising it. The beginning of the incision of the fatty capsule should be on the spinal side, because a little recklessness in this spot might possibly lead to damage of the peritoneal cavity and its contents. After the free incision of the fatty capsule the kidney is brought well forward into the wound so as to change its position, rendering it oblique, thus correcting the flexure of the ureter, a condition which is so constantly present in advanced malposition of the kidney. The kidney is liberated of fat down as far as its hilus, the capsule is freely but carefully scarified with cambric needles and the organ imbedded in iodoform gauze or plain sterile gauze, making a new position of the kidney. We create a condition in which we rely on exciting active tissue repair, after which we find it lined throughout by a pavement of fine, healthy tissue, anchoring the kidney in its normal position.

Those of you who have not seen our method of after-treatment may be interested in knowing how we treat the wound. It is left widely open after the tumor is removed and is packed with gauze. By this simple procedure we invariably secure beautiful primary wound healing, which compares favorably with the healing of the wound after suturing. This operation was performed several weeks ago and not a single suture was employed either for the fixation of the kidney or to unite the wound. We simply bring the granulating surfaces together, a small absorbent compress holds the wound surfaces together. A pad, consisting of a folded towel, is placed in the hypochondriac region, thus reinforcing the gauze packing of the kidney. This is incorporated in a bandage which passes around the waist and holds the dressings and compress in place.

You know that this wound is a linear one, and what we always like to see about a wound, particularly after operations for tubercular affection, there is a tendency of the scar to contract. There are no exuberant granulations to be found here and the process of repair is about complete. We shall advise that this towel support remain in place in order to support the delicate scar and to prevent undue stretching. We shall also supply the patient with an abdominal bandage which she will wear for the next four or six weeks. I have now the greatest difficulty to palpate even the lower pole of the kidney by abdominal palpation. The

kidney is now fixed permanently in its normal position by firm connected tissue adhesions. The position of the kidney now is not a vertical one, but an oblique position. which you know is as it ought to be under normal conditions.

Sarcoma of the Pericardium.

A case of this very rare disease is reported by J. C. Williams and A. L. Miller in the New York Medical Journal for April 14th.

The case was one of primary diffuse small celled sarcoma of the parietal pericardium in a boy about thirteen years of age. Both of the boy's grandfathers had died of carcinoma of the stomach, and an aunt with carcinoma of the breast. He died after being under observation for three months. There was enormous uniform thickening of the pericardium, no involvement of the epicardium, slight enlargement of the peribronchial and mediastinal glands but no glandular enlargement was found elsewhere.

The neoplasm was large, irregularly rounded and lobulated, of a yellowish-white color and of fairly hard consistency, though it tore apart very easily. The anterior surface was rather flat and had the appearance of having been attached to the under surface of the sternum and costal cartilages. The lower surface was firmly attached to and involved the diaphragm; the sides showed a distinctly lobulated appearance. It weighed together with the heart and both lungs, six pounds and a quarter.

Treatment of Puerperal Sepsis.

The clinical value of the newer methods in the treatment of puerperal sepsis is discussed by John O. Polak in the Post Graduate for April.

He emphasizes the following points:

That puerperal sepsis usually begins in one of two forms of endometritis, *i. e.*, putrid or septic. Except, when the infection has been direct through the inoculation of lacerations and abrasions by the streptococcus or by the tetanus or diphtheria bacillus.

That while the curette is indispensable to the successful management of putrid endometritis, it is harmful in an empty uterus, such as is commonly found in the septic form.

That all forms of septic infection are benefited by general stimulation and supportive treatment.

That, of the antitoxins used, ungt. *cr    * has proven its superiority over the anti-streptococcic serum.

That blood-washing and the artificial

production of a hyperleukocytosis are valuable adjuncts to the routine treatment.

Finally, that hysterectomy post-partum should be limited to those cases in which the sepsis is localized, as a metritis with pyosalpinx, or tubo-ovarian abscess, after the acute symptoms have somewhat subsided, and that most parametric pus collections can be more safely handled by vaginal section.

The Widal Test.

According to William Ophuls in the Occidental Medical Times for April, the Widal test is a valuable measure in the positive diagnosis of typhoid fever.

He says that a certain dilution is not so important as the use of an appropriate time limit with the dilution chosen.

Only an absolutely perfect reaction, that is, complete immobilization and uniform clumping should count in making a diagnosis.

By adhering to this rule Widal claims not to have made any mistakes in 390 controls, although he still adheres to the old fashioned dilution of 1 to 10.

After examining the objections to the method he comes to the following conclusions, which do not differ materially from those originally formulated by Widal.

The test ought to be made with a fixed dilution and a proper time limit.

When it is possible to exclude the possibility of a former attack, the presence of the reaction is positive evidence of an infection with typhoid fever bacilli, *e. g.*, in 999 out of 1,000 cases of the presence of typhoid fever. A negative reaction does not exclude typhoid fever, but the presence of the disease becomes the less likely, the later in the course of the disease the test remains negative. It is therefore advisable to make repeated examinations in all suspicious cases.

Perforating Ulcer of the Stomach.

J. M. T. Finney discussed this subject before the American Surgical Association and, as reported in the Medical Record for May 5th, stated that the severity of the symptoms and the prognosis depended on: (1) the size of perforation; (2) whether, at the time of perforation, the stomach was empty or full; (3) the position of the patient (unimportant); (4) the nature of the infection, character and number of bacteria being of the utmost importance. Experiments with a case of duodenal fistula at Johns Hopkins Hospital showed that infected milk was discharged with the infec-

tious organisms still active. Hence the speaker urged the necessity of using sterilized food, and of sterilizing the mouth for two days prior to operation. Hyperacidity seemed, under certain conditions, to favor development of germs. (5) As in typhoid, leucocytosis was of great importance when present. An important question was: Shall we use opium, and how much? The answer was, most emphatically, to use only as much opium as was absolutely necessary to ease the pain. Another question was: Shall we await shock? Equally emphatic was the answer, *i. e.*, to operate immediately. This was particularly true if the symptoms were growing more pronounced. Local anæsthesia, combined with a few whiffs of chloroform, if necessary, was of great importance in operating for diagnosis. Indeed, in this manner the entire operation was best done. The steps were as follows: the cardia should first be examined; second, the pylorus; third, the lesser curvature, and last, the posterior surface. He closed by speaking of the hopeful results of surgical intervention.

Infant Food from Cow's Milk.

A safe and simple method of preparing infant food from cow's milk is needed by mothers, especially at this season of the year.

E. H. Bartley, in the Brooklyn Medical Journal for May, gives the following directions for making a safe food:

"Siphon off from the bottom of a bottle of fresh milk of good quality three-fourths of its contents, leaving the cream and upper part of the milk undisturbed in the bottle. This may be easily done with a small glass syphon or rubber tubing, previously filled with water to start the siphonage. Pinch one end of the rubber tube and hold it firmly, while the other is thrust through the cream and to the bottom of the bottle. Lower the outer end into the inner vessel of an ordinary double boiler, and release it, when the skim-milk will run out, provided the latter vessel is kept lower than the milk in the bottle. To the milk thus drawn off add a teaspoon and a half of a good Essence of Pepsin, and warm slowly in the double boiler to blood heat, and keep at that temperature until thoroughly curdled. Now heat, with constant stirring, until a thermometer dipped into the milk shows a temperature of 155 deg. F., and remove from the fire. Strain, while hot, through clean wire strainer and dissolve in the whey a heaping teaspoon of sugar of milk and the white of one egg. When cold, pour the sweetened whey back into the milk bottle

and mix thoroughly with the cream and top milk. Pasteurize the mixture in a Freeman's pasteurizer.

NOTE.—Should this food prove too laxative, reduce the quantity of milk sugar. It is well to add, at the time of feeding, from one to two teaspoonfuls of lime water to each meal. As the child increases in age and strength the amount of bottom milk siphoned off may be diminished."

Cystitis in the Female.

Abram Brothers, before the New York Obstetrical Society, discussed some points in the diagnosis and management of cystitis in the female.

According to the Annals of Gynecology and Pediatrics for April, he related the various visible changes in the bladder in disease and accepted Casper's classification: 1. Change in color and lustre; 2. increased capillary circulation; 3. swelling; 4. changed secretion. The inspection of the bladder is positively contraindicated in acute inflammations, but is allowed in all forms of sub-acute and chronic inflammations. Dr. Brothers narrated in detail the treatment of the various forms of vesical inflammation, insisting upon as early an examination of the bladder cavity as is permissible for the establishment of the exact diagnosis. He then showed the Nitze instrument comparing it as he exhibited it, with the instruments devised by Kelly. He claimed simplicity and greater ease of manipulation for the Nitze cystoscope.

Mastitis.

According to the Medical Standard for May, Fenger, in speaking of this disease, says it may occur in (1) the new born in which it comes on three to five days after birth and disappears soon, rarely suppurating, (2) at puberty, the inflammation disappearing in a few weeks to three or months and may have simple treatment with compression, rarely terminates in suppuration, (3) at the menopause, usually localized, not very acute, rarely terminates in pus formation, but ends in resolution with shrinkage of the gland from formation within the gland of cicatricial tissue. Differential diagnosis from carcinoma best determined by examination of indurated tissue rather than to wait for possible development of carcinoma. The mastitis occurring (4) during lactation, due to invasion almost always of staphylococcus albus or aureus, is more common on the right side. In operating always make incision in a radial direction, the nipple as the center.

Electrocautery in Throat Diseases.

According to S. G. Dabney, in *Medicine for May*, the conditions in the throat which are most often helped by the electrocautery are: (1) Deep-seated follicular inflammation of the tonsils, especially in the shrunken tonsil hidden within its folds. (2) Enlarged lymph follicles on the posterior pharyngeal wall—the so-called granular sore throat—a common cause of clearing the throat and a little hacking cough, and an occasional cause of pain. (3) Mycosis of the fauces. Here the small spear-like projections grow from the faucial and lingual tonsils. They are difficult to remove and tend to recur. Electrocautery is the best treatment. (4) Enlargement of the veins at the base of the tongue. This condition may cause the sensation of a foreign body in the throat, and quite frequently causes a small amount of blood to be spit up, especially in the early morning. (5) Enlargement of the adenoid tissue between the base of the tongue and the epiglottis—the so-called lingual tonsil. This is a frequent cause of the tendency to swallow when there is nothing to be swallowed—known as “empty swallowing”—and of a feeling of fulness in the throat and some disturbance of the voice, with or without laryngitis.

Suppurative Pericarditis.

The surgical treatment of this condition is discussed by John A. Ouchterlong, in the *American Practitioner and News* for April 1st.

In order that the incision for suppurative pericarditis shall be satisfactory, it ought to comply with certain requirements.

The opening into the heart-sac ought to be sufficiently roomy to permit examination of the condition of things within and to permit drainage with two drainage-tubes of sufficiently large caliber, and to enable the operator to effect removal of fibrinous masses that may exist.

The incision ought to be so made as to afford the most easy discharge of pus, and so that even the posterior portion of the pericardium may be drained without thereby embarrassing the movements of the heart.

Its situation should be such that after contraction of the pericardium has taken place, it may not be outside the pericardial area.

On cutting through the thoracic wall, the pleural cavity should be protected against infection from pus in the heart-sac.

The incision should be made within the

area of absolute dullness, so as to avoid injuring the lung.

The mammary vessels should be avoided, or, if the incision is in their vicinity it should be so made that they may be easily ligated.

Great attention should be given to avoid injury to the heart.

The operation should be as simple and uncomplicated as possible; at all events, when the patient is much depressed, when also general narcosis must be avoided.

Membranous Croup.

Fifty cases of membranous croup, treated by the same method, with 38 recoveries and 12 deaths are reported by O. A. Fliesburg in the *Northwestern Lancet* (*Archives of Pediatrics* for April).

In the series none but true cases with membrane were included; of the series 13 cases were instrumental with 3 recoveries; the balance, 37 cases, were treated exclusively by the method here detailed with 35 recoveries, or in all 50 cases with 38 recoveries. These cases were seen over a period of 14 years and all were membranous.

The treatment consists in the administration of powders composed of the hydrochlorate of apomorphia gr. 1.100-1.40, calomel gr. 1, bicarbonate of sodium gr. 2. These powders are given dry on the tongue, one every hour. It is claimed that the usual doses of apomorphia are too large, but this in a small dose and combined with the calomel and soda there is a stimulating, antiseptic effect from the whole powder not to be had when one ingredient is administered alone.

Rupture of the Liver and Gall Bladder.

Two cases are reported by Carl V. Vischer in the *International Journal of Surgery* for May, and after a careful consideration of such cases he concludes as follows:

That injuries of the liver, followed by a greater or less hemorrhage, are accompanied by shock, which is largely in proportion to the amount of the bleeding, and which has a tendency to grow progressively worse, terminating in collapse in a relatively short time.

Inasmuch as such injuries are usually fatal, operative interference, if at all undertaken, must be done at the earliest possible moment, for even after the hemorrhage ceases, peritonitis is most prone to develop in these cases.

That in injuries to the gall-bladder, the shock is not so pronounced, and reaction usually sets in. The prognosis is, therefore, more favorable.

The escape of bile into the abdominal

cavity, from a ruptured gall-bladder or ducts, is not necessarily fatal. Were it possible to recognize such an injury as a certainty, we would almost be justified in giving a favorable prognosis, and even in postponing operative interference until complete reaction from the shock has taken place.

That the mere drainage of the abdominal cavity after rupture of the gall-bladder will often suffice as an operative procedure. In late interference we are apt to find adhesions of the viscera to such an extent as to make anatomical land-marks and visceral relationships unrecognizable, and inasmuch as they prevent the dissemination of any septic matter that may be present, it is advisable not to disturb them.

Acute Diabetes in a Boy Aged Five Years.

Pediatrics for May 1st says that W. A. Milligan, in the *Lancet*, gives the history of a case of this kind.

On admission, the boy was very weak and wasted, and complained of an intense thirst. He was very restless, and his respiration was 40 per minute. Pulse 140, temperature 97.4 deg. F. Tongue coated, but breath had distinct, sweet smell. Ten days before admission the patient was very constipated, and received enemata which relieved the trouble. Five days later there was severe vomiting and great thirst. During the next three days, these symptoms got steadily worse, and the boy lost flesh rapidly. Two nights before admission he had incontinence of urine. On admission, the urine contained a considerable quantity of sugar, and some albumin. Codeine pills and an antidiabetic diet were prescribed, but the temperature continued subnormal, the pulse and respirations increased in frequency, until the patient became comatose. He died after a few hours of coma. The writer states that the case was remarkable for its extreme acuteness. Incontinence of urine, when it occurs suddenly, is a symptom which should make us suspect diabetes. The occurrence of albumin with sugar is a bad prognostic sign. Heredity plays no part in this case. The peculiar sweet smell of the breath is a sign of impending coma.

Carcinoma of Uterus and Vagina.

A case of total extirpation of the vagina and uterus for cancer is reported by A. Sippel in *Centralb. f. Gyn.* (Post-Graduate for April).

The case was one of primary vaginal carcinoma in which the vaginal lumen was

completely obliterated by the new growth; the author dissected out the entire length of the vagina from its surroundings and then proceeded and tied off the uterus from its connections with the broad ligament. He succeeded in removing vagina and uterus in one mass, from the periphery without invading the diseased vagina. The patient recovered.

Medicines by the Nasal Cavities and the Feeding of Patients by the same Method.

Salomon, in *Progres Medical*, reported in *Pediatrics* for May 1st, states that he has used this method in his practice for twenty years, in cases where it was impossible to use the stomach tube without violence. His method simply consists in pouring the medicine, or food, in solution, directly into the patient's nostrils. The patient is placed on his back, the head is bent backward, and held in this position, if necessary. It is useful, in some cases, to swab out the nostrils with a weak solution of cocaine. One nostril is then plugged with cotton, and the liquid poured into the other by means of a spoon. One must be careful to wait for the beginning of an inspiration, and to pour just at the moment when it begins. There is never any asphyxia, as the fluid drops down directly into the pharynx, and never into larynx. The procedure is indicated whenever other means of artificial feeding are insufficient, difficult of performance, or dangerous. It is especially valuable in the country, where no other paraphernalia are at hand. The only objection to it is that it is slow, but this may be compensated by the concentration of the food used.

New Treatment for Eczema.

Radcliffe Crocker, in *Health*, quoted by *Va. Med. Semi-Monthly* for April 13th, has proposed a new way of treating obstinately recurring eczema, which is well worthy of attention, as it does not interfere with other treatment. The method consists in the application of a counter irritant, not to the part affected, but to the other parts of the body which have some connection with the nerve centers. The counter irritant used is an ordinary mustard leaf, but when that is not sufficiently strong a blister is produced with liquor epispasticus. For the face alone the mustard leaf (or blister, as the case may be) is applied behind the ear; for the face and forearms, apply it to the nape, and for the leg the counter irritant should be applied on the hip over the large sciatic nerve. In most

cases this treatment has been followed by removal of the itching, and the relief lasts from one to several nights. The redness and swelling are also relieved.

Nerve Injury from Fracture.

George R. Fowler presented the following case before the Brooklyn Surgical Society as reported in the Brooklyn Medical Journal:

L. E., æt. 22, suffered a fracture of the left humerus about 4 inches above the elbow. Five weeks later, when the splints were removed, the hand was stiff, and it was not until two months later that he realized that paralysis existed. He was treated by electricity until he applied at Dr. Fowler's service at the New York Polyclinic, where he presented a typical wrist drop. The divided musculo-spiral nerve was identified and sutured by the Brun's method with kangaroo-tendon. The club-shaped upper end was found with considerable difficulty. The arm was put up in strong flexion to avoid tension upon the sutured nerve-ends.

Prompt healing followed. The operation has been of too recent date to expect evidences of restoration of function at this time.

Ovarian Cyst.

In the Annals of Gynecology and Pediatrics for April, Clement Cleveland reports a case of ruptured ovarian cyst, which he removed.

The patient gave a history of a fall. At the operation a great deal of fluid was found in the abdomen and a tense cyst at the side of which another ruptured cyst or possibly part of a multilocular cyst. There was a peritonitis present, so drainage through the cul-de-sac was established. Dr. Skene's clamp was used satisfactorily in the removal of the tumor. Despite all efforts, the patient's bowels could not be made to move, and pain and nausea became continuous. Finally, forty-eight hours after the operation, the lower bowel was distended by oxygen gas up to the point of pain. After this, the twist or obstruction evidently being relieved, the patient passed gas, the distention disappeared and the abdomen became flat. The patient is now in stupor and the prognosis is bad. The reason for reporting the case is to speak of the method of distending the lower collapsed bowel in the hope of relieving the obstruction higher up, which must be useful in other cases.

In reply to questions by Dr. Boldt, Dr. Cleveland said that he had used oxygen in preference to carbonic acid gas because it was present,

Functional Dysphonia in the Course of Syphilis.

In the Rev. Hebdom. de Larynx., reported in the Medical Bulletin for April, Chauveau writes, not of laryngeal paralyzes of syphilitic origin studied by authors, but of certain functional disturbances, the relations of which with syphilis seem to have escaped observations. He reports the case of a singer who contracted syphilis and who was troubled by certain vocal disorders. There were no appreciable anatomical lesions in the pharynx or larynx, but the right vocal cord was sluggish. There seemed to be insufficient action of the thyro-arytenoid and the ary-arytenoid. Four injections, made with eight days' interval, produced a cure as far as the power and endurance of the organ were concerned.

Foreign Bodies Left in the Abdomen after Celiotomy.

One hundred cases in which foreign bodies were left in the abdomen after celiotomy are reported by Neugebauer in Centralblatt für Chir., as stated in the Therapeutic Gazette for April.

Fifty-eight patients recovered, forty-two died. Twenty-nine times a sponge was lost, twenty-eight times a tampon or gauze compress, four times a drainage tube, and nineteen times artery forceps. In a number of instances two foreign bodies were left in. The sponges were generally recovered by second section. It is noteworthy that the majority of tampons and compresses were discharged spontaneously through the rectum.

Treatment of the Consumptive Poor.

There is no doubt that such cases can be treated better than they are at present, and the fact that they should be is beginning to dawn upon the people, if only as a matter of self-protection.

John F. Russell, in the New York Medical Journal for May 5th, thinks that the dispensary treatment may do much for such cases if properly carried out.

He gives the following instructions:

1. That they must come to the dispensary twice each day, Sundays and holidays included, without regard to weather.
2. That they must eat regularly and all they can of what they have, being guided in their selection of food as far as possible by our suggestions. Tea and coffee are allowed but once a day, and all alcoholics are forbidden.
3. That they must keep their feet dry

and warm and avoid overclothing. Corsets are forbidden.

4. That they must sleep with windows wide open in all weather; that they are to keep in the open air, avoiding overexertion or exercise as much as possible; that they must not go to places of amusement, keep late hours at night, etc.

5. That they are to have a satisfactory movement of the bowels each day. No medicines except cathartics are used.

He shows in his paper:

That a large number of poor people suffering with pulmonary tuberculosis in a curable condition can not go to sanatoria for treatment.

That dispensary treatment is practicable, successful, and comparatively inexpensive.

That curable pulmonary tuberculosis by dispensary treatment is confined to the early stage.

That without organized effort such cases are difficult to attract for treatment, owing largely to ignorance of the disease and a belief that it is incurable.

That the treatment covers a long period and patients require daily supervision.

That the majority of dispensaries at present make no adequate provision for such treatment.

That it is the duty of such dispensaries to organize classes for this purpose.

The advantages to be derived from the general adoption of the plan of treatment outlined are as follows:

Many are cured.

All are benefited.

All are educated and made capable of protecting and teaching others.

All, laboring and idle alike, can come for treatment.

In the end it will break down the deep-rooted belief that pulmonary tuberculosis in all stages or any stage is incurable and lead to the application for relief early in the disease.

Sterilization of Cat Gut.

Charles A. Elsbery, in the Medical Record for May 5th, gives a preliminary report on a new and simple method of sterilizing catgut.

1. Catgut, freed from fat, is tightly wound in single layers on suitable spools.

2. The spools are boiled for from ten to thirty minutes in a hot saturated solution of ammonium sulphate in water, made by adding chemically pure ammonium sulphate to boiling water until no more will dissolve.

3. Two per cent. carbolic acid solution may be substituted for the water if a quicker sterilization (three to ten minutes) is de-

sired; or 1:1,000 chromic acid solution, if the catgut is to be chromicized.

4. The spools are thoroughly washed by agitation for from one to two minutes in cold or better warm sterile water, carbolic acid, or bichloride solution of any strength.

5. The catgut spools are preserved in strong alcohol.

6. For resterilization the catgut spools are boiled for from five to fifteen minutes in any of the solutions, and washed in the same manner as described under 4.

Suppurative Pancreatitis.

The Therapeutic Gazette for April says that Guinard (*Revue de Chirurgie*) found in his hospital service a woman twenty-two years old, suffering from fever and violent pains in the epigastric region. She was shocked, and the abdomen was tender and slightly tympanitic. The patient was watched for several days, during which period the diagnosis fluctuated from perforating gastric ulcer to appendicitis, and finally to hematocele. The patient suddenly becoming much worse, an immediate incision was made in the epigastric region. The lower border of the liver was adherent to the anterior surface of the stomach. On freeing these adhesions and tearing through the more inflammatory material, a large sac, filled with brownish pus, was found in which were floating necrotic particles of tissue. This cavity was drained, and the patient recovered with a fistula, from which there flowed a small quantity of pancreatic fluid.

Tuberculosis of the Middle Ear.

A case of acute tuberculosis of the middle ear is reported by Gaudier in the *Gaz. des Mal. Infant.*, according to the Archives of Pediatrics for April.

A boy of five years had an otitis media following an angina. There was a large fungoid mass in the auditory canal, and an operation showed the bone to be soft, friable and filled with large fungosities, a mass of which later burst through the wound and attained the size of an orange. Guinea-pigs inoculated with portions of this mass died of general tuberculosis. The boy died with symptoms of meningitis and pulmonary tuberculosis.

Among 21 cases of fungoid otorrhea the author has only seen two tuberculous cases, which seem to be rare and difficult to diagnose. Stress is laid upon the rapidity of the development of the fungosities and the persistency with which they return after removal.

Significance of Albuminuria.

For a long time it was thought that albumin in the urine was always indicative of Bright's Disease, in fact albuminuria was a synonym of this disease until about the year 1840.

Now we know that this condition is only a symptom of a number of disease manifestations.

According to Orville A. Kennedy, in *Medicine for May*, albuminuria may be associated with coarse organic lesions of the kidneys, which includes chronic parenchymatous nephritis, chronic interstitial nephritis and acute diffuse nephritis. We may have in addition to these, functional albuminuria or albuminuria with no evident renal lesions, extra-renal albuminuria, or albuminuria derived from the genito-urinary tract.

The conditions which give rise to functional albuminuria are numerous. Goodhart gives as the most important forms:

The lithemic, which may occur at all ages, the result, especially in children, of too heavy feeding on solids without sufficient liquid being taken with the food.

The hemoglobinuric, in which, instead of the urine of hemoglobinuria, albumin is passed. This form is sometimes caused by a cold bath, and it is the paroxysmal albuminuria of other writers.

The neurotic, which, according to Goodhart's theory, is caused by the exhaustion of the higher brain centers from work or worry.

In the extra-renal form the albumin is found only in traces, and is derived from the genito-urinary passages, accompanying leucorrhea, or other venereal discharges, and cystitis. It may also be due to the natural seminal fluid or prostatic secretion. Oxaluria may give rise to albumin in the urine by the sharp edges of the crystals of calcium oxalate scratching the mucous membrane of the urinary passages.

Traumatic Pneumonia.

Medicine for May says that A. Sonquez, in *La Presse Medicale*, gives a study of a certain variety of pneumonia known as *pneumonie contusive*. By this he understands a pneumonia developing after a blow on the walls of the chest, in which there is no solution of continuity in the lung tissue such as would come from a fractured rib or the penetration of a foreign body. He has studied forty-nine cases of this type and finds that the pneumonia is usually of the bronchial variety. Rarely is it croupous, and still less frequently interstitial. The most frequent form is pleuropneumonia.

He studies the manner in which this form of pneumonia is produced and the role traumatism plays in its development. He comes to no definite conclusions on this point, but claims that the number of cases so far recorded establish the etiological relation of traumatism of the chest and the subsequent development of pneumonia.

The Treatment of Dysentery with Permanganate of Potassium.

According to the *Therapeutic Gazette* for April, Gastinel, in the *Journal de Med. de Paris*, states that he has obtained excellent results from the rectal injection of permanganate of potassium in dysentery. He employs the drug in the strength of eight grains to the quart. Half of this quantity is given at a dose, and is allowed to remain in the bowel from half a minute to two minutes. The water is either cold or warm, according to the needs of the case. For the removal of large quantities of mucus in the bowel he employs an injection of a pint of water in which is dissolved thirty grains of bicarbonate of sodium. This is followed by a permanganate injection, and after this has been given the patient is made to lie down and rest for at least an hour in order to secure immobilization of the intestine. It is claimed that by this treatment the pain and restlessness are diminished. In many cases it is only necessary to inject one or two ounces of fluid. Often it is wise to give a small dose of calomel for a time to increase the hepatic activity. When children receive this treatment, one or two grains of permanganate to the quart of water is sufficient.

When is Cancer Cured.

W. H. Jalland, in the *British Medical Journal*, reports an interesting case showing how long after operation and apparent cure a cancer may return.

According to the *Post-Graduate* for April, in November, 1890, the author removed a scirrhus growth (the identity of which was proved by the microscope) from the axilla of a woman. She continued perfectly well until the autumn of 1899, when she noticed a small lump in the neighborhood of the old cicatrix. This was removed, together with the breast to which it was attached, in January, 1900, *i. e.* about nine years and two months after the first operation. This secondary growth was examined by the Clinical Research Association, which reported as follows: "This specimen shows a secondary scirrhus carcinoma in the fat of the axilla. It is not contained in lymphatic glands, but has evi-

dently been deposited along the course of the lymphatic vessels."

In conclusion the author says: "Hearing, as we do, so much in the present day of a 'time limit,' I think this case worth recording."

Ossicectomy.

According to Medicine for May, R. Lake, in the *Lancet* of March 10, 1900, says that complete ossicectomy is a successful operation entirely free from danger. By it the health is often improved and rarely, if ever, diminished. All cases do not yield to this operation, the indications of which are roughly divided into two main classes: (a) Those for the cure of chronic suppurative otitis media, and (b) those for the improvement of hearing and cessation of discharge. An uncomplicated otorrhea which has resisted treatment for six months is certainly a case for operation. In none of the writer's cases in which the operation was performed for chronic suppurative disease were the ossicles intact. In old-standing cases the chain is never intact. Of the fifty cases operated, forty-two were cured; three had temporary relapse; and of the eight cases which were not cured, some of them may have recovered later, as they passed from under observation. Improvement was noted in the hearing power in twenty-one cases; in three it returned to normal, and in four it was very much improved. In the remaining fourteen the improvement was appreciated by the patient and friends - and was demonstrated by tests.

Treatment of Suppurative Prostatitis.

Guiard, in the *Annals des Maladies des Organes Genito-Urinaires*, reported by the *Therapeutic Gazette* for April, basing his conclusions upon a single case, suggests as the simplest and safest treatment of prostatic abscess, and one thoroughly efficient, puncturing through the rectal wall by means of a trocar, followed by a thorough irrigation with mild mercuric solution. By this proceeding he accomplished a prompt and permanent cure.

Uric Acid in Epilepsy.

According to the *Medical News* for May 5th, James J. Putnam and F. Pfaff have been repeating some observations made concerning the relations of uric acid to epilepsy. It was reported by Krainsky that before a seizure the amount of uric acid excreted was distinctly lessened, while afterwards it was increased. Drs. Putnam and Pfaff have failed to confirm this. The

elimination of uric acid bears no relation to epileptic seizures. The uric acid doctrine dies hard, and its worshippers cling to it most faithfully. In Dr. Putnam's opinion, it is probable that too much weight has been thrown in recent years on the role of toxemias in the production of symptoms of disease.

The Leading Editorials of the Month.

Surgery Outside the Hospitals.

The demands of modern surgery are so great that in many cases they can only be met in a well equipped hospital.

According to Hospital, the general tendency of operative work to drift into the hands of hospital surgeons, which has made itself so manifest of recent years, is a matter of considerable interest to the medical profession.

But it is really a matter of even more importance to mankind at large, for it would indeed be a sorry outcome of all the increase of knowledge which has been gained by so much labor, if instead of leading to greater perfection of surgical work among the mass of the profession, it were merely to lead to lead to the concentration of surgical practice upon that small number within the profession who are able to obtain hospital appointments. Yet such has been the tendency. To many an aspiring surgeon a visit to a thoroughly up-to-date operating theatre is a depressing experience, for he feels, and sometimes he is even made to feel, that to attempt to enter upon the higher walks of surgery without the aid of such helps and appliances as he finds there on every side, almost an impertinence. And there is something to be said for such a view. The surgery of to-day does not concern itself merely with doing operations which are urgently necessary, and without the doing of which the patients would quickly die. Modern surgery is to a large extent a surgery of election. Operations are done not merely because they are necessary, but because they are considered safe; this safety hinges almost absolutely upon the maintenance of asepsis; and if it is true that such a degree of asepsis is essential for the safe performance of operative work can only be secured by the elaborate and costly surroundings provided in modern hospitals, then good-bye to surgery for the ordinary practitioner, and good-bye to the benefits of surgery for that large portion of mankind which dwells outside the reach of hospital treatment. Yet the tendency to restrict operative work to hospital surgeons

is one which is strongly supported not only by the public, which always votes for specialism, but even among our profession. It is only quite recently that it was urged by a well-known American surgeon that "modern surgery is best done in hospitals, which can afford every facility for clinical investigation," the view taken being that the constant bacteriological testing of surgical technique, which is only possible where there is a perfectly equipped clinical laboratory, "is the first requisite for work of high standard."

Although this is in a sense true, and although it is to be admitted that operative surgery of the highest type is most easily performed where every possible appliance is at hand, the teaching that the practice of surgery should be more and more confined to those who have these advantages, and that the rest of the profession should be more and more confined to those who have these advantages, and that the rest of the profession should accept a humbler role, and should, in commercial phraseology, become the country agents of great operating firms, is one that we should very sorrowfully and reluctantly accept; and all the more so since recent surgical developments have shown that what may be called emergency surgery demands surgical skill of the highest type. If it were true that emergency surgery need only be a sort of "first aid" it might be reasonable to argue that the greatest good to the greatest number would be attained by ordinary surgeons restricting their ambitions to simple proceedings, and sending straight to hospital every complicated case. But this is no longer the position of affairs. Nothing is more clear than that if the best is to be done in purely emergency work the surgeon must be possessed of a high degree of surgical skill, and must be able to carry out his proceedings without delay and with the same degree of asepsis as is found necessary for the highest class of work done in hospitals. A man gored by a bull, a "run over" case with perhaps a rupture of the liver, a woman with a perforated ulcer of the stomach—all of them emergencies which may occur in the remotest country village—require for their proper treatment the highest type of operative surgery, and men able to tackle such emergencies properly need not stand aside from any surgery that is likely to come in their way.

Those then who despair of surgery outside hospitals are placed in a serious dilemma. Either emergencies must be bungled or surgery must be rendered possible even without the gorgeous appliances which we see in hospitals. Under these circumstances

we turn with some relief to an address recently delivered by Mr. Lockwood, before the Leamington Medical Society, on the organization of aseptic operations, in which he laid it down that the necessary perfection of asepsis can be attained by attention to details which can be carried out as satisfactorily, although perhaps not with the same ease, in a private house as in a public hospital. Everyone knows how high is the ideal of asepticity which Mr. Lockwood sets up, and how he has worked for years proving each step by which he hopes this ideal may be reached, and with this in view it is interesting to find him speaking as follows: "To my mind, one of the leading characteristics of aseptic surgery is its extreme simplicity. I do not know of any detail which cannot be carried out in a private house as well as in the most elaborate and expensive operation theatre." To the few the hospitals will perhaps always offer the highest facilities. But in proportion as hospital machinery is glorified, and the popular superstition is spread abroad that without hospitals good surgery is impossible, the development of surgical skill among the profession at large will be held in check, much to the loss of mankind. Bacteriological investigation in clinical laboratories does good and admirable work in elevating the standard of asepsis within the hospitals. But for the benefit of the ordinary workaday world it perhaps does even better work still when it is able to evolve an organization of operative proceedings, a routine if one likes to call it so, by the adoption of which a surgeon may cut himself adrift from his base, and without the support of a bacteriological laboratory, or the aid of an elaborately fitted operating theatre, may go out into the world and do good surgical work.

No Expectoration, No Tuberculosis.

Some of our London Councilmen should come over to Charlotte and see how well we manage things. According to the Medical News the Municipal Council of Paris has recently passed an ordinance prohibiting expectoration upon the sidewalks and streets of that city and imposing appropriate fines and imprisonment. The British Medical Journal in commenting upon this and urging the London County Council to take similar action enforces its argument by the statement that "In many of the principal cities of the United States spitting upon the sidewalks or pavements is forbidden and the prohibition is rigidly enforced."

This to us is a most pleasing bit of intel-

ligence or rather it would be, were we permitted to lay this flattering unction to our souls. But candor compels us to admit that our English cousin has, we fear, taken the will for the deed and rather overstated the actual situation. 'Tis true that such laws are upon our statute books but, alas, in shame be it confessed, their observance consists more in the breach than in the doing. We have not been wanting in convincing orators who have depicted the dangers of the dissemination of tuberculosis by means of the sputum in such glowing colors as to crystallize conviction into statutes and ordinances, but the hygienic sense of the people has not yet become sufficiently enlightened to uphold their enforcement. Indeed the scenes that are constantly witnessed upon the streets of New York are enough to bow the head of every intelligent citizen in shame and humiliation. Upon a breezy morning recently a policeman sought protection from the chilling blasts in one of the receding angles of the Dewey Arch and, as if to hedge himself about from all intrusion, with his back to the corner, he erected upon the pavement a geometrically constructed barricade of expectoration, reaching in a circle from one protruding angle of the base of the Arch to the other. The process was sufficiently disgusting in itself, but when to the sight of it was added the reflection that the perpetrator was an officer charged with the enforcement of the very law he was so complacently violating, the hopelessness of the situation became oppressive. But the sequel was if possible still more disgusting. Toward evening of the same day, after the sputum had been dried to a powder in the sun and air, a woman, in the guise of a fashionably dressed lady, with her arm twisted around in the present characteristic fashion so that she might raise her skirts from the ground, was standing, waiting for a trolley car, directly over the spot beautified in the morning by the geometrically arranged sputum. The car passes a little beyond its expected stopping-place, and the lady in her eagerness to get on board lets go her grip upon her skirts and makes a run for the car. A more perfect sweeping the pavement could not have had. The dust rolls up in masses beneath those skirts and finally bursts out at the sides in such clouds that the passer-by, who had observed the performance of the morning; held his breath in self-protection and waited for the dust to subside. The woman carried the most of it away, however, in the meshes of her dress and skirts, to be shaken out and disseminated about the room of her home. There is undoubtedly no more fruitful source of tuberculosis infection than in the

process above described—a procedure transpiring daily, yes, hourly, upon the streets of thousands of cities all over the civilized (?) world. And yet we wonder that tuberculosis is so prevalent that it seeks its victim in such unexpected places and causes one-seventh of all deaths that claim mankind.

Rheumatism as a Diagnostic Scapegoat.

We use "the grip" down here a good deal, but the Medical News says that Rheumatism is a most convenient word. Like charity it covers a multitude of shortcomings, diagnostic as well as pathologic. It is easy to nod one's head, look wise and pronounce a painful affection rheumatism, and it is not difficult to outline a course of antirheumatic treatment. As the ordinarily prescribed antirheumatics are the coal-tar antipyretics and analgesics, which, in peripheral nerves, ameliorate painful conditions of the most varied kind, alleviation of pain almost invariably follows. A toothache may be greatly benefited by the same remedies, yet it will scarcely for that reason be considered rheumatic in origin. The therapeutic test for rheumatism, since we have no specific treatment for the condition is, of course, unreliable. Many of the painful conditions, both subacute and chronic, which are diagnosticated and treated as rheumatism are really manifestations of other pathologic conditions, and any rational therapy must be founded on more accurate diagnosis.

Some times the mistake of diagnosis has no serious consequences. The chronic condition underlying the painful affection is not rendered worse by the neglect to treat it directly. Not infrequently, however, delay is fraught with unfortunate results. When an incipient tuberculosis of the ankle or knee-joint is treated by rubbing and passive motion instead of by rest, when the referred pains of tuberculous hip-joint disease are misconstrued as rheumatic, harm always results. Fortunately, the subject has been so thoroughly impressed upon the practitioner by the appeals of the orthopedic surgeons that the condition of tuberculous joints is not often mistaken in our day.

The most fruitful sources of error now are undoubtedly flat- or weak-foot and the various occupation neuroses in the hand and arm. The tendency of weak-foot to cause a painful condition which is felt near the base of the big toe and around the heel, as well as in the ankle-joint, marks it out because of its diffuseness as almost surely rheumatic in origin. Usually the calf-muscles suffer in their function because of the spasm around the ankle and the loss of

mechanical advantage by the alteration of the arch of the foot. This causes pain in the leg as high as the knee and confirms in the careless observer the diagnosis of rheumatism. Needless to say, no amount of antirheumatic treatment will relieve the symptoms.

Writers' cramp is but one of a series of spastic and painful conditions that may develop from improper use of arm-muscles. Pain in the muscles attached to the epicondyle has been noted from carrying an umbrella on a blustering day. The painful "skirt-wrist" from holding up heavy skirts is a familiar example in these days. Various neurotic conditions of the arm for which there is no localized anatomical basis have been classed frankly as brachyalgias. All of these conditions are liable to exacerbations in damp weather, somewhat as dental nerves that have once been affected are more sensitive while dampness prevails.

Most of these conditions require a tonic rather than the depressant antirheumatics. Most of them are benefited by local measures. Weak-foot requires the special orthopedic treatment suited to the condition. The pain due to the improper use of arm-muscles can only be overcome by the correction of bad habits in their employment. In a word, definite diagnosis of the exact parts affected by the painful condition is absolutely necessary, not only to discover the true character of the affection that is complained of, but also to assure the rational therapy of the condition.

The Physiological Effects of Rhythmical Vibration.

Music hath charms to soothe a savage, split a rock and kill a cabbage, and even the noisy train may be used as an anesthetic.

The New York Medical Journal says that the close connection between physical and physiological processes is becoming daily more and more evident. Rhythmical movement having been established as the essence of light, heat, electricity, etc., would naturally suggest itself as having some connection with the innermost processes of cellular life and with all the modifications and manifestations thereof—*e. g.*, nerve force, embryonal development, and so forth. The relation of physical laws to biological processes is a subject of profound interest and one which would well repay a more careful and systematic study than has hitherto been accorded to it. Such experiments, for instance, as that of the figures assumed on a plate of glass by a layer of sand when a violin bow is drawn down the edge of the

glass, at once call to mind the idea of the segmentation of the yolk. The way in which a glass or a tuning fork will in its turn take up the dying vibrations of another glass or tuning fork in its vicinity, attuned to the same note—*i. e.*, when the number of the vibrations to the second in each of them is practically identical—has, we believe, been used to suggest the dynamic character of the action of drugs upon the human economy, and to explain the predilection of certain drugs for certain tissues, or, more properly speaking, the selective action of certain tissues whereby the vibratory influence of certain drugs is drawn primarily to themselves, only spreading thence to the whole organism in widening but weakening waves like those occasioned by a stone thrown into a pool.

We have been led to these reflections by the perusal of a suggestive paper on Vibration as a Hypnotic and Anæsthetic, which was read last year before the Mississippi State Medical Association by Dr. B. F. Ward, and published in its Journal for February. Dr. Ward relates the extraordinary case of a workman who, returning home tired, sat down to rest on the end of a crosstie of a railway track with his head bent forward and his elbows resting on his knees, intending to take only a short rest. He knew nothing until near day next morning, when he awoke, presumably in the recumbent position, with the sensations succeeding a natural sleep, feeling only a little chilled from the cool morning air. On attempting to rise, however, he discovered that there was something wrong with his left arm, and found that it was lying directly across the rail, and that a train had passed over it, crushing it to a pulp, a little above and including the elbow, but not entirely severing the skin. The arm was cold, and no train was in hearing in either direction, so that the man must have lain for a long time after the train had passed over it, where he had fallen parallel with the track, his arm lying across it. The man felt no pain whatever, and no shock, and his circulation was normal. He walked firmly and leisurely into town, holding the dead arm with his right hand, to Dr. Ward's, where it was amputated. There was no mark or contusion about the body or head, and not the slightest sign of cerebral concussion. The suspicion of drunkenness was entirely eliminated, not only by the absence of any indications thereof at the time, but also by the testimony of his fellow laborers that he was steady, sober and a total abstainer.

The explanation of this case is found by Dr. Ward in the doctrine, supported, he

says, by the facts collected in twenty years of observation and pertaining to quite a number of similar railroad casualties, that "when a man lies or sits on a railroad track in touch with rail or cross-tie, the rhythmic vibration communicated to the rails by the revolving car wheels, even at a great distance, slowly and surely soothes his nervous centres into a gentle somnolence which, as the vibratory wave steadily and uniformly increases in force with every revolution of the wheels, deepens gradually into narcosis and anæsthesia as profound as can be produced by chloroform or ether." The author cites in general support of the plausibility of this explanation the lulling effect of "rocking" upon an infant, and of the rhythmical nature of a cooing lullaby song, the murmur of a distant waterfall, or the patter of the rain upon the roof, and lastly the process of hypnotism, which consists of three factors, the first two of which, limitation of vision and fixing of attention, are merely methods of obtaining isolation of the nerve centres, while the monotonous vocal influences are vibratory in character.

From these considerations the author arrives at the conclusion that "narcosis and anæsthesia may be produced by vibratory force, and that the vibration, in order to effectually exert its specific force upon the nerve centres, must be uniform and rhythmic, and to reach its greatest intensity the vibratory wave must gradually and steadily increase in force." This leads naturally to the suggestion that "it would require no very exalted mechanical skill to construct a metallic operating table with wheels run by electricity against rails attached to the lower surface of the table, that would impart to the table, and to the subject thereon, a vibratory force exactly similar to that which the steel rail receives from the revolving wheel (of an approaching train) and equally potent, and that a perfect anæsthesia might thus be secured as free from danger or subsequent distress as the natural sleep of an infant or the peaceful slumber of a healthy man."

The suggestion, notwithstanding the author's expectation of its "provoking a smile of incredibility," seems to us one that it would be better to make actual trial of than to argue about, since it is of that practical character which permits of experimental verification or otherwise. It must not, however, be forgotten that a considerable number of persons under varying conditions would have to test its anæsthetic powers, for susceptibility to vibration would probably vary as much as, if not more than, to chloroform or ether inhalation.

Many other possible applications of this vibratory influence, some of which recall Dr. Mortimer Granville's nerve-vibration treatment, are suggested, and generally it might receive an expectant trial in all that class of cases suitable for hypnotic treatment or for electricity, massage, etc.; while even in certain forms of insanity, by its soothing power upon morbidly excited nerve centres, we might look hopefully for benefit from its application.

The Treatment of Appendicitis.

The New York Lancet says that the last word is yet to be said on this most fruitful topic, and it is likely that for a long period of time a diversity of views, and consequently a diversity of procedure, will obtain. On some important points there is a reasonable unanimity of opinion. That all cases, or even a majority of cases, require operative procedure is no longer made a conservative claim. Probably not twenty-five per cent. of all the cases recognized assume in their clinical history so serious an aspect as to warrant surgical interference. This is the inference both from the clinical history and pathology. This becomes evident when the ætiology of the disease is considered. The essential fact in appendicitis is the interruption of the normal intestinal communication between the cæcum and the appendix. Other causes may operate to bring on an attack. The presence of foreign bodies in the appendix may, though infrequently, produce it. Denudation of the mucous surface of the appendix, from any cause, may allow the bacillus coli communis to perforate the gut and induce septic processes. Adhesions, the result of former inflammatory action are occasionally responsible for its development, and not infrequently tubo-ovarian disease and pelvic abscesses become important factors in its production. The diagnosis is not always easy, though it usually is. When suspected it is always wise to secure prompt evacuation of the bowels with a saline, preferable sodium sulphate. Great caution is to be exercised in the use of opiates to relieve pain, as it is liable to mask the disease and lull to false security. If anything is given, codeine and camphor are indicated. If relief of the symptoms does not follow thorough evacuation of the bowels the severity of the attack is not to be doubted. So many symptoms go to make up or accompany the disease, that very careful discrimination is required in the differentiation. The location of the point of greatest pain and tenderness may not correspond with McBurney's point,

even in its incipency, and when septic peritonitis ensues the pain is likely to become correspondingly diffused.

In the early history of a case, as well as during its continuance, rigidity of the rectus muscle on the right side not infrequently is of value in determining the lesion, though it should be remembered a tubo-ovarian abscess or chronically inflamed ovary develops similar symptoms. If, after the action of a saline, diminution of pain and fall of temperature do not follow, the question of operation should at once be determined. It is at this point that vacillation and procrastination swell the needless mortality of later operations. There is a type of appendicitis which will not fall into this category—the fulminative variety—in which the septic processes are so rapid and overwhelming that, unless seen before the diffused septic peritonitis ensues, surgical intervention is likely to be unavailing, and may be altogether contraindicated. There is a milder type which, while of the septic variety, is not so rapid, yet delusive in the seeming security it invites. The tenderness and pain may not be pronounced, the temperature may remain near the normal point, but the patient gives evidence of grave illness. It is in cases like these that the frequency and quality of the pulse are of great diagnostic value as to the gravity of the situation. The pulse is frequent, often 120, thready, and compressible; the patient suffers great vital and cardiac depression. If operative interference is permissible and advisable, there is no time for delay. Unfortunately the surgeon often sees cases in conditions like those enumerated in which he deems interference the only chance, and in the courageous discharge of a plain duty his results may not be satisfactory; and this adds to the popular prejudice—fostered to some extent by unwise and untimely interference—that operations are never justifiable. In case pus cavities are found, the surgeon will guard with greater care against the danger of further exploration and satisfy himself with careful drainage, leaving for the future any further surgical procedure. The indications for after-treatment of recurrent appendicitis are so plain that he who runs may read. If serious in their nature they should be operated on as soon as the patient is thoroughly convalescent. The risk of operation is then only trifling, while the danger of recurrence is an unmeasured but often a perpetual menace to the life of the patient. As regards the surgical aspect of this disease the emphasis must be placed on the necessity of early operation when the grounds for interference are plainly evident. It is here that

surgery has revealed its most beneficent and brilliant results; and if the case can be seen early, operation can usually be decided upon within forty-eight, and often thirty hours, of the attack.

As to medical treatment, the use of salines and the ice bag in many cases seems of great utility. Experience and skill must decide when the limit of their usefulness has been reached. Fortunately their use is often salutary, and by their judicious employment the patient can frequently be saved the necessity of operation.

Finally, it must be admitted that in doubtful cases the question of diagnosis is beset with serious difficulties; and that the line of treatment to be adopted will test the judgment and skill of the physician and surgeon to the highest degree.

Pneumonia. Its Complications and Sequelæ.

One of the important diseases with which we have to deal is pneumonia says the Chicago Clinic, because of its extreme frequency and fatality. It prevails at all seasons; it attacks persons of all ages, from infancy to old age; it shows no predilection for station in life, selecting its victims from the rich and the poor alike. The death rate is especially high among the aged and alcoholics, because of diminished power of resistance. Something like 75 per cent. of the persons above sixty, who die of acute disease, die of pneumonia. In all likelihood it is caused by the *diplococcus pneumoniae*, and should be classed among the acute infectious diseases. It should be regarded as *slightly* contagious. Something more than the presence of the diplococcus in the lungs is required to precipitate an attack—namely, lowered vitality, or diminished resistance. This appeal to lowered vitality as a factor in the etiology of the disease, is, however, only an acknowledgment what we are confronted by a mystery as yet impenetrable. The depressing effect of cold—a favorite makeshift of the past—can no longer be invoked as a satisfactory explanation, since we know that pneumonia is rather rare in the arctic. It is uncommon, also, in the tropics. Only in the temperate zone does it seem to be thoroughly at home. Rather more frequent in winter and spring, it is scarcely less prevalent during summer and autumn.

Sudden in its onset, destitute of symptoms that seem alarming to the patient, it has the victim at the brink of the grave before he has time to conclude that there is much amiss. It never threatens. A chill, generally well defined, marks the onset. In

from a few hours to two or three days the consolidation of lung area has taken place. Death usually occurs in uncomplicated fatal cases in from five to seven days, but may occur much earlier. Death during the first twenty-four or forty-eight hours is not uncommon.

The treatment is largely symptomatic. There is no specific, nor is any routine treatment to be commended. Each case has its own peculiarities. In general, however, the disease being asthenic, must be met with supportive measures. Good nursing and care are of the first importance. Death usually occurs from exhaustion of the heart muscle. Strychnia spurs the heart on to further action, and hence should be freely given until after the crisis, when it may be diminished or withdrawn. One-thirtieth grain every two hours, or even more, is often necessary. Digitalis is not so reliable an agent, and does not meet this indication so well. Whisky is of use. To the exclusion of other food, a teacupful of *hot* milk should be given every two hours, with regularity,—more if the patient will take it. A little morphia may be necessary to relieve pain, but should be used sparingly. Should there be cyanosis, oxygen is indicated. This is often a remarkably valuable agent with which to tide the patient over the danger point. It is usually given too sparingly. Strychnia to keep the heart going, and nearly continuous inhalation of oxygen, may carry the patient safely past the crisis, when nature will come to the rescue. Cough syrups are generally useless, and sometimes harmful. Excessive temperature should be reduced by the sponge bath, being careful not to move the patient unnecessarily. There is no disease that renders one so incapable of exertion as pneumonia. Antifibrin, and all the coal-tar antipyretics are harmful.

Pneumonia may be complicated with pleurisy. Fortunately the pleurisy is usually dry. However, the added pain helps to wear the patient out.

During the third stage the hepatized lung assumes a gray color, the product of inflammation undergoes a fatty metamorphosis, is absorbed and eliminated, or expectorated. Occasionally this change fails to occur. The lung remains solid, and assumes a fibrous character. This is a very unfortunate complication, as the lung will in all probability remain permanently useless. Moreover, from restricted motion, tuberculosis frequently supervenes. The chest wall becomes retracted, the shoulder depressed, the spinal column curved, and the unaffected lung develops a compensatory emphysema. For this condition but little

can be expected from treatment. Iodide of potassium may assist in promoting absorption. Exercise in the open air, and pulmonary gymnastics, may be beneficial. Exercise should not be carried to the point of increasing the emphysema. Time brings but little improvement. These subjects usually perish, sooner or later, from tuberculosis.

Occasionally an area in the solidified lung tissue breaks down, or disintegrates, forming an abscess. This occurs in two or three per cent. of the cases. The abscess may break into a bronchus, or into the pleural cavity, or it may be absorbed. This complication is a grave one, but recovery usually occurs. Convalescence is tedious, and complete recovery only comes after the lapse of considerable time. Plenty of air, abundance of nourishing food, and exercise, as soon as it is permissible, will assist nature in effecting a cure. The medicinal treatment should be tonic. A mixture of tincture cinchona co. and syrup of wild cherry is especially useful.

The remarkable frequency with which pneumonia is developed after a serious surgical operation, or grave accident, deserves mention. The disease under these circumstances is especially grave in its prognosis, for obvious reasons, and occurs more frequently among alcoholics.

Pneumonia arising from traumatism, or from stasis, is not properly pneumonia at all. The condition, however, may be of grave import.

Pneumonia occurring in persons who have latent tuberculosis is often the means of causing rapid progress in the tubercular condition. In place of improvement after the crisis, there is progressive emaciation, hectic, expectoration of tubercular material, and a rapid decline, ending in death in a few weeks. It was formerly supposed that the pneumonia produced the phthisis. But in the light of our modern knowledge of the etiology of consumption, we know that the tuberculosis was the pre-existing disease, and that the pneumonia is only the means of lowering the vitality to such a degree as to allow rapid growth of tubercular material.

Sometimes one attack of pneumonia rapidly succeeds another in the same individual. Before the first area of consolidation has cleared up, another area is invaded, and occasionally a third area later. These cases of "relapsing pneumonia," as they are called, are very prone to terminate fatally.

A typhoid pneumonia is only a pneumonia that assumes a typhoid condition. The term is frequently misunderstood and misapplied.

Licensing Midwives in New York.

The Plunkitt Bill entitled An Act: "Regulating and restraining the practice of midwifery in the City of New York by others than legally authorized physicians," has passed the Senate and Assembly and is now awaiting the signature of the Mayor and Governor in order to become a law, (Medical News). There seems to be an ideal as well as a practical side to the midwifery question. The ideal is presented in the argument that no one who possesses less knowledge than is demanded of the practitioner of medicine in this State should be permitted to practice midwifery. It is considered against public policy to lower the standard in order to provide for a class to practice midwifery even in normal labor only, as is provided in the Act known as the "Plunkitt Midwifery Bill." Imperfectly educated women must not be licensed by the State to practice midwifery and become a menace to public health, as it is requires no less knowledge than that which is possessed by a licensed physician to protect the mother and child from injuries and diseases to which they are both specially liable at this time. On the other hand the argument in favor of the practical solution of the question presents the fact that midwives have always existed, and the belief that they will always continue to exist. That the work midwives do in caring for the family as well as for the mother and child makes their services invaluable to the poorer classes of the community. They deliver the mother, wash the child, cook the family meal, care for the other children, and if necessary do general housework while the mother is lying sick in bed. Midwives are often selected to do the kind of work that is beneath the dignity of a physician to do, but is essential and helpful to the family of the poor sick mother.

If midwives should be examined by a regularly constituted examining board under the control of the Regents of the University of the State of New York and a license issued to them by the State, the poor of the community would not be the prey of the criminally ignorant midwives who now practice in all the cities of this State. As there is little hope that the supporters of the ideal side will be able to abolish this class of midwives let us accept the practical solution of the question which will secure to the poor of the community better attendants by weeding out the criminally ignorant midwives who occasion so much misery, disease and death.

The objection to the present bill is that it establishes a special board of examiners appointed by the New York City Board of

Health from the corps of Sanitary Inspectors. This is a fatal error and the bill should be opposed by the profession before the Mayor and if not successful there the defect in the bill should be convincingly presented to the Governor.

The Cleveland Medical Library Association Reception and Smoker.

The Cleveland Medical Gazette has the following take-off on the up-to-date society which is so true to life that we are tempted to fill in the names:

On Saturday evening, February 3rd, the Cleveland Medical Library Association gave an informal reception and smoker to the medical profession of Cleveland at the Library Building, 586 Prospect street. The committee in charge of the arrangements was composed of Dr. A. Baker, Dr. H. H. Baxter and Dr. William Lincoln. The opinion of all is that the committee did their work well.

After a number of the physicians had arrived and spent some time in chat and smoking, Dr. A. R. Baker called the meeting to order. He made a few introductory remarks and then introduced Rev. Dr. E. E. Baker, who spoke in a most complimentary way. Mr. A. W. Cogswell sang several solos which were heartily appreciated. He was accompanied on the piano by Mr. Sontum.

Dr. Frank E. Bunts followed with a short address and read the following paper, which deals in a pleasing, satirical manner with the present method of discussion in some medical societies:

AN UP-TO-DATE REPORT OF PROCEEDINGS OF AN UP-TO-DATE MEDICAL SOCIETY.

First Surgeon: I have to bring before the members of this society a report of an extremely interesting case of rupture of the liver. The patient was accidentally kicked over a fence by a mule and fell with his right side striking on a nigger head. No symptoms developed for twenty-four hours, when the family, becoming alarmed at the absence of symptoms, I was called in to see the case and at once diagnosed a rupture of the liver. The signs were somewhat obscure, but an operation made some thirty-six hours subsequent proved the correctness of my observations. The liver and portal vein were carefully sutured, the abdominal wound closed by four rows of sutures—catgut, silk, silk-worm gut and silver wire respectively—and the patient made an uneventful recovery, the stitches being removed on the seventh day, and the patient returned to his occupation as mule driver two days later, or nine days from date of

operation. In conclusion I would say that the chief points of interest in this case are the accuracy of the diagnosis, as well as of the facts in the case, and the most excellent results following a most hazardous and desperate operation.

Chairman: The most interesting paper of Surgeon — is now open for discussion.

Oculist: I am sure we are very much indebted to Surgeon — for his most valuable contribution to surgical knowledge, and the case reminds me of a rupture of an eyeball in a well-known man about town, following an attempt to watch all the ballet girls at once. In this case I made a careful examination with the ophthalmoscope, finding marked evidence of blepharospasm posterior synechiae and choked disc and external strabismus. The treatment consisted of a prompt removal of the eye. The cure was prompt and uneventful, and up to this date he has not attempted again to attend a ballet performance. In conclusion, I again wish to congratulate the author and the society upon his paper.

Gynecologist: The subject under discussion is somewhat out of my line of work, but is a very brilliant result and reminds me of a case of endometritis fungoidis complicating a Bartholinian cyst in a patient 96 years of age. In this case I removed the uterus and appendages per vagina after excision of the cyst. She made an uneventful recovery, and has since married and feels as young as she did seventy years ago. I thank the doctor for the opportunity which his paper has given me to present this case.

Rhinologist: I cannot allow this opportunity to pass without referring to a case which this valuable report of a rupture of the liver has brought to mind. Some years ago Mary G. snuffed a bean up her nose. A careful inquiry at the time failed to reveal the bean, but yesterday, or two years from the date of first observation, there appeared an unmistakable bean sprout extending at the anterior nares. I at once diagnosed a sprouting bean and removed it, under cocaine. No untoward effect was produced, the patient making an uneventful recovery. The interesting feature in the case was that the patient came from Boston and had probably been addicted to the bean habit for many years. I congratulate the doctor upon his very able paper.

Neurologist: Rupture of the liver must call to mind of all of us that from such sudden jars we may obtain ruptures of the cerebral sinuses, or hemorrhage into the spinal canal. In a similar case to that re-

lated by the doctor, motor paralysis was present from the moment of receipt of shock incident to receipt of check for an outlawed bill. I made the diagnosis without any difficulty and offered to relieve the patient of the exciting cause. This he refused, and his paralysis was recovered from in time to take in the races the next day. Again I wish to congratulate the doctor upon his very elaborate and painstaking paper.

Second Surgeon: I can but endorse everything that the author has said and appreciate fully the value of the paper. I wish to take exceptions, however, to the means of diagnosis and to say that from the symptoms related there could not possibly have been a rupture of the liver—nor could he, in my estimation, have sewn up the portal vein without seriously interfering with the functions of the liver and bringing on an attack of the piles. In all the cases of this kind in which I have operated I have made it a point at the same time to dissect out very carefully the pile bearing area. In conclusion, Mr. Chairman, I would say that I hope no one will think from my remarks that I differ in any essentials from the practice of my distinguished confrere.

Orthopedist: During my connection with the Hospital for Cripples I noticed very often and have the records of 150 cases which show the difference in appreciation of pain in different children. In some of the cases of kyphosis a plaster bandage was well tolerated, notwithstanding the formation of decubital sores, extending down to and laying open the spine—while in others bitter complaint was made by the patient and it was necessary to remove the plaster and apply it according to an original method devised my me. The resemblance between these cases and that related in the paper this evening is very marked, and I appreciate the value of this addition to medical knowledge as confirmatory of my own experience at the Hospital of Cripples.

Chairman. As there is no further discussion upon this paper, I would say that we are all very much pleased by the elaborate and carefully prepared discussion which it has called forth—and I will ask Surgeon — to close the discussion.

Surgeon —. The field of surgery has been so fully covered that I feel it impossible for me to add anything to that which has been already said.

The foregoing paper was appreciated by all, and Dr. Bunts was congratulated on the faithfulness of his reproduction. Refreshments for the inner man completed the program, which ended about 11 p. m.

Clean Newspapers.

"While as a rule I have not been an endorser of the methods of the Cincinnati Post, of this city, one can not help support them in their decision to no longer advise the medical quacks whose advertisements are full of utterances most damaging to young people, and who flaunt their wretched announcements in the most infamous terms. I know positively that one alleged medical company has been paying the Post \$600, but the advertisements were of the most nauseating nature and were dropped, although appearing in just as flaming statements in other papers. The Post has been declining all such advertisements for months and its management proposes to live without them as soon as all existing contracts expire. The growth of these medical freaks is something awful and they have been made possible by the freedom with which the dailies encouraged them in the use of their columns. Perhaps the Post has at last really introduced a commendable movement."—*Chic, Feb. 24.*

The Cincinnati Lancet-Clinic comments on the above extract in the following vigorous style:

The unexpected ever and anon takes place or turns up, and here it is in a form that seems almost too good to be true. Twice-told tales are not a circumstance by comparison. Cogitating, the old refrain softly, gently floats through the ambient air:

While the lamp holds out to burn,

The vilest sinner may return.

An echo is heard—

We will welcome him,

We will welcome him

Just now, just now,

We will welcome him just now.

This is one of the most remarkable evolutions that has ever taken place in the local press, and means much more than an everyday item of ordinary information. It means primarily a clean newspaper. Eliminate the vile quack ads., that are a delusion and snare to the unwary, for they are all based on a criminal offense of obtaining money under false pretense, and the paper becomes normally clean and fit for family reading. It means a normal elevation, purity of tone and character that is commendable. It means a probable loss of revenue to the paper, which the writer believes will be more than made good at an early day. The natural instinct and institutions of a vast majority of people are in favor of good morals, and hence will favor the newspaper that stands for their opinions. Quack ads. constitute an important part of the revenues of the ordinary daily paper, and their en-

tire elimination will surely take any such paper from that category and place it in the extraordinary column. The writer firmly believes the act will pay the paper that takes this step in a financial way. It certainly will be remunerative in the satisfaction to be obtained from a positive knowledge of having done a good act. The influence following will be incomprehensibly great, and cut in every direction. If the Postoffice Department will only follow up this line of policy and eliminate from the mails the third and fourth-class matter that is fraudulent and caters to crime, what a change for the better would follow!

The Lancet-Clinic gladly joins Chic in extending its warmest congratulations to the Post. May it live long, prosper and never die, consolidate or merge!

The Post has some ad. contracts that are unexpired and a few of these may run for some time, but most of the class referred to are transient, and will, according to Chic, disappear.

It is one of the easiest things in the world to criticise the management of a newspaper of any sort; even medicals prove no exception, and pretty near every alternate man firmly believes he can guide the rudder pen altogether better than the man then doing the work. He would put more snap, less gush, more news, less scare heads, more learned dissertations, and change nearly everything for the better, illustrating the old saw: "Where ignorance is bliss 'twere folly to be wise."

The makeup and issue of any daily paper, however insignificant, is a task of no ordinary dimensions, and the man who can do this day after day and make the paper a success is a major-general in ability. He is one of the world's great men, and possesses the attributes of leadership with his fellows. To be or not to be are the decisions of a moment; time for references and verification are out of the question. That mistakes do sometimes happen is always conceded and regretted, but the making of them is narrowed to the limit or an oft-tried judgment. Journalists of experience realize the trying positions in which they are often placed, wish it were not so, but conscious of good and honest motives, drive their pens for an uplift of their fellowmen.

Journalists, as a rule, have very high conceptions of their occupation. In a way that is their own they constitute themselves into clerics, both preaching and teaching to audiences long out of reach of the most stentorian of tones. Unconsciously they become both bench and bar, and set a court of highest resort, giving utterance to everyday findings of a public opinion jury.

From this high pinnacle he comes easily down to a reception of a want ad. or a construing of a notice of birth at the house of Mr. and Mrs. Jones, for which thanks are tendered to Dr. Barnes, as though he was the author of the heir apparent to the hospital-house of Jones. As there may be some confusion in the names owing to similarity of sound a nice discrimination must be made, so that the real, genuine and no mistake of parental authorship will be made.

All of these things and more are submitted to a managing editor, so that when the alternate man imagines himself to be a born journalist don't smile, but let him alone in his glory; it would be unwise to rudely jostle and awaken him to a shimmering scene of reality.

Baths and Expectancy in Typhoid Fever.

The International Medical Magazine has some interesting articles on typhoid fever in the April issue. Editorially it says that in the treatment of typhoid fever the majority of medical teachers in this country, England and Germany—perhaps a majority of them in all countries—agree in advocating either cold baths according to Brand's system, or the expectant and symptomatic method. When the baths cannot be given properly and in the cases for which they are unsuitable, a class much larger than was at first supposed, a preponderance of authorities would now unquestionably advise a mainly expectant plan. We have taken the trouble to look up the directions for the treatment of typhoid fever in a number of the best of the recent text-books on the theory and practice of medicine.

Strumpell, writing in 1883, referred to the use of carbolic acid in doses of five to ten grains in the twenty-four hours as having its advocates, and also Liebermeister's claim that iodine has a beneficial influence, but himself doubted the efficacy of all such remedies and warmly recommended the Brand baths. He referred incredulously also to the claim of Wunderlich and others that calomel may exert a specific and sometimes even abort the disease.

Osler condemns all attempts to modify the course of enteric fever by antiseptics, or, indeed, by any medicines, prescribes the Brand baths together with diet, and advises the meeting of symptoms as they arise. Writing in 1892 he has seen no good results from carbolic acid and iodine, but had not tried any of the mercurials. He continues still to be of the same opinion, only more so, and frequently at meetings of the American Medical Association waxes eloquent in denunciation of Woodbridge

and his adherents, who claim that they cure all their cases of typhoid fever by the energetic use of certain combinations of antiseptics with minute doses of calomel and podophyllin.

Pepper, in the article on this fever written in 1893 for his "American text-book of the Theory and Practice of Medicine," advised hydrotherapy, especially the Brand method, and for cases in which this was unsuitable, he placed some faith in a very cautious use of antipyretic drugs. As a routine treatment "in every case from the first hour" he always prescribed nitrate of silver "purely for its surface action, just as it would be used in a case of idiopathic gastrointestinal catarrh."

James C. Wilson, in his "American Text-Book of Applied Therapeutics," says: "Enteric fever, like the other acute specific febrile affections, runs a course, uninfluenced by medicines." While maintaining that the milder cases require no medication or other treatment except to have the symptoms combated, he speaks most favorably of cold water baths according to Brand, and cites the statistics showing the exceedingly small death rate under this plan when strictly carried out. Both Osler and Wilson, as well as most recent teachers, lay great stress upon these extraordinary statistics, thus conceding that theories of treatment need to be brought to the empirical test. On another page will be found a communication from Prof. Wilson giving his most recent views and results.

James M. Anders, in his "Practice of Medicine," gives the preference to the treatment by cold baths, and points out the fact that these were originally introduced by Currie, of London, more than a century ago, having been reintroduced by Brand. Anders describes the Brand method in detail and credits it with an average mortality in this country of seven and three-tenths per cent. He concedes some efficacy to the medicinal antipyretics, but cautions as to their injurious action upon the heart. He makes some use of intestinal antiseptics in typhoid fever, though he does not believe that they can destroy the bacilli. Prof. Anders refers also to the experiments that have been reported in the way of curative inoculations with cultures of serum in this disease, and occupies a waiting attitude with regard to them. His latest views as to the treatment of typhoid are embodied in a paper which appears upon another page. Clearly, he is not to be classed among those who believe that an expectant treatment is virtually the only alternative to the Brand baths.

Tyson also gives to the Brand method,

which he carefully describes, the first place in the treatment, but concedes that "in private practice the difficulties of the treatment are greatly increased—sometimes insuperable." As substitutes he considers sponging and packs as often quite efficient, and condemns antipyretic drugs as on the whole unreliable and unsafe. He prefers to supplement the cold spongings and packs with the expectant-symptomatic treatment. With regard to the specific treatment by cultures or serum, he thinks the results do not yet admit of any definite conclusions.

Wilson in comparing the Brand method with the expectant-symptomatic plan in his "Applied Therapeutics," states the mortality under the former as seven or eight per cent., and under the latter as twelve to fifteen per cent. His present communication to the International reports a mortality of seven and five-tenths per cent. in a series of 1,904 cases treated by Brand method, and while the general mortality in Philadelphia for ten years has been 14.5 per cent. Manifestly, the cold baths are impracticable in a large proportion of cases among the poorer class in private practice, even in cities, and are quite out of the question as a rule in the country, where trained nurses and the necessary appliances for administering baths safely are usually unattainable luxuries. Besides, these are many cases for which the baths are contraindicated. Is the expectant-symptomatic treatment with a death-rate of twelve to fifteen per cent. the best that can be given in all the cases in which tubing is impracticable? There are other methods for which extraordinary claims have been made, especially those in which antiseptics and elimination are prominent features, and these should receive a thorough and unbiased investigation.

A New Plan in Medical Teaching.

The medical student will soon take his education *a la carte* and it is but natural to suppose that he will order desert mostly. The Kansas City Medical Index-Lancet says that the Chicago University, which now includes the faculty of Rush Medical College are about to inaugurate a sensation in medical education by adopting what they term the elective system of studies.

This institution which is very strong in financial and intellectual resources, after due consideration believe this plan to be the ideal method of medical education. Under the new regime, students will be allowed to select, or rather "elect" their own special studies which will be known

as optional, while other departments of study will be compulsory.

The system will include the teaching of all departments of science, not excepting the various pathies, such as homeopathy, eclecticism and possibly Christian Science, osteopathy, and other similar fads. By this new plan, the student will also be allowed to select his own teacher, as by this method it is hoped that only those who can teach will be retained in the teaching faculty, thus disposing in a simple manner, of the common troublesome question of getting rid of "dry timber."

The inauguration of this plan when it occurs will be watched with a great deal of interest by other medical college faculties as it certainly embodies many features of interest to all those concerned in the education of students. One question which will undoubtedly arise in the minds of many is, what particular action will the college section of the American Medical Association, as well as the general body of the organization take when such an apparent violation of its traditional conservative tenets occur?

No one who is acquainted with the personnel of the Rush Medical College faculty will doubt that before the inauguration of such an elaborate and radical plan, all possible questions of opposition will be carefully considered and answered at least satisfactorily to the promoters of this seeming extravagant new invasion.

MISCELLANEOUS.

FORTY-SEVENTH ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

Tarboro, N. C. May 22, 23 and 24.

OFFICERS FOR 1900.

President—Geo. W. Long, M. D., Graham.

Vice-Presidents—C. M. Poole, M. D., Craven; J. H. Williams, M. D., Asheville; James M. Parrott, M. D., Kinston; W. D. Hilliard, M. D., Asheville.

Secretary—Geo. W. Pressly, M. D., Charlotte.

Treasurer—G. T. Sikes, M. D., Grissom.

Orator—T. S. McMullan, M. D., Hertford.

Essayist—R. H. Whitehead, M. D., Chapel Hill.

Leader of Debate—James M. Parrott, M. D., Kinston.

COMMITTEES AND CHAIRMEN OF SECTIONS.

Board of Censors.

Dr. G. G. Thomas, Wilmington; Dr. L. J. Picot, Littleton; Dr. R. H. Speight, Wrendale; Dr. M. H. Fletcher, Asheville; Dr. C. M. Poole, Craven.

Committee on Publication.

Dr. J. R. Brevard, Charlotte; Dr. G. W. Pressly, Charlotte; Dr. D. O'Donoghue, Charlotte; Dr. A. J. Crowell, Charlotte.

Committee on Legislation.

Dr. R. H. Lewis, Raleigh; Dr. G. T. Sikes, Grissom; Dr. N. P. Boddie, Durham; Dr. L. J. Picot, Littleton; Dr. H. A. Royster, Raleigh.

Obituary Committee.

Dr. K. P. Battle, Jr., Raleigh; Dr. P. L. Murphy, Morganton; Dr. G. W. Purefoy, Asheville.

Pathology and Microscopy—Dr. Carl V. Reynolds, Asheville.

Anatomy and Surgery—Dr. Arthur Pendleton, Warrenton.

Medical Jurisprudence and State Medicine—Dr. John McCampbell, Morganton.

Obstetrics—Dr. N. P. Boddie, Durham.

Gynecology—Dr. B. Ray Browning, Littleton.

Practice of Medicine—Dr. W. O. Spencer, Yanceyville.

Materia Medica and Therapeutic—Dr. D. J. Hill, Lexington.

Chemistry and Physiology—Dr. L. P. Aaron, Mt. Olive.

Pediatrics—Dr. J. R. Irwin, Charlotte.

Railway Surgery—Dr. W. D. Hilliard, Asheville.

DELEGATES TO AMERICAN MEDICAL ASSOCIATION.

Drs. A. G. Carr, Durham; H. B. Weaver, Asheville; S. D. Booth, Oxford; N. B. Herring, Winston; C. P. Ambler, Asheville; G. L. Kirby, Raleigh; M. Olivia Nelson-Denison, Asheville; J. P. Munroe, Davidson; W. W. McKenzie, Salisbury.

DELEGATES TO SOUTH CAROLINA MEDICAL SOCIETY.

Drs. J. A. Burroughs, Asheville; Annie Alexander, Charlotte; F. H. Russell, Wilmington; W. H. Wakefield, Charlotte.

DELEGATES TO VIRGINIA MEDICAL SOCIETY.

Drs. Anna M. Gove, Greensboro; H. W. Lewis, Alexander; C. L. Minor, Asheville; W. H. Ward, Plymouth; B. L. Long, Hamilton.

DELEGATES TO AMERICAN PUBLIC HEALTH ASSOCIATION.

Drs. A. A. Kent, Lenoir; Carl Von Ruck, Asheville; J. W. Long, Salisbury; J. A. Reagan, Weaversville; S. H. Lyle, Franklin.

TRANSPORTATION.

The following notice has been sent out by the Railroad Commissioner, Mr. W. H. Fitzgerald.

To general Passenger Agents:

The undersigned has been requested by lines in this Association, including the S.C. & G. Extension and Seaboard Air Line, to announce rates based on tariff 2, circular 5174, in the sale of round-trip tickets to Tarboro, N. C., and return from points within the State, including Norfolk, Suffolk and Danville, Va., account of above occasion. Tickets to be sold May 15, 16, 21 and 22, final limit May 26th, 1900; continuous passage in each direction. The following total rates on this basis will apply from junctional points, viz.:

FROM	VIA	RATE
Blacksburg	So. Ry.	*13.20
Charlotte	So. Ry. S.A. L.	11.20
Durham	So. Ry.	5.50
Danville, Va.	So. Ry. S.A. L.	9.85
Fayetteville	A. C. L.	5.05
Forest City	S.A.L.R.C. & G.	13.80
Gastonia	So. Ry.	12.00
Goldsboro	A. C. L.	3.00
Greensboro	A. C. L.	8.05
Henderson	S. A. L. So. Ry.	5.50
Hickory	Sy. Ry.	11.80
Lattimore	S. A. L. S. C. & G.	13.35
Marion	So. Ry.	13.40
Maxton	A. C. L.	6.70
Mooresboro	S. A. L. S. C. & G.	13.50
Newton	So. Ry.	11.40
Norfolk, Va.	A. C. L.	4.85
Pembroke	A. C. L.	6.20
Raleigh	So. Ry.	4.50
Rural Hall	So. Ry.	9.70
Rutherfordton	S. A. L. S. C. & G.	13.95
Sanford	S. A. L. S. C. & G.	6.75
Selma	A. C. L.	3.00
Shelby	S. A. L. S. C. & G.	13.20
Suffolk	A. C. L.	4.05
Weldon	A. C. L.	2.75
Wilmington	A. C. L.	5.15
Winston-Salem	So. Ry.	9.20

*Basing rate including transfer.

See your local ticket agent a few days before the date and if you do not live at a junctional point have him get you a ticket.

ACCOMMODATION IN TARBORO.

The hotel rates will be from \$1.00 to

\$2.00 per day, and in case the hotels are crowded, visitors will be taken in private homes, so that all who come may be assured of a comfortable place to stay. All members are urged to be present and to bring any of their friends who should be members of this Society. The local committee will be glad to furnish any information in regard to arrangements.

CALENDAR.

Wednesday, May 16th.

Board of Examiners meet.

Tuesday Morning, May 22, 11 o'clock.

Society meets.

Called to order by Dr. Julian M. Baker, Chairman of the Local Committee of Arrangement, Dr. Geo. W. Long in the chair.

Prayer by Rev. J. B. Morton, pastor of the Presbyterian church.

Address of Welcome by Donnell Gilliam, Esq., of Tarboro.

Response by Dr. John R. Irwin of Charlotte.

Roll Call.

President's Message.

Appointment of Committees on President's Address, Credentials, Finance and Pittman Prize.

Wednesday Morning, May 23, 10 o'clock.

Election of two members of the Board of Medical Examiners to serve two years.

Appointment of the Committee on Nominations.

Wednesday Morning, 11 o'clock.

Report of the Board of Medical Examiners, giving the names of the successful candidates.

Wednesday Noon, 12 o'clock.

Conjoint meeting with the State Board of Health.

Wednesday Afternoon.

Election of officers for 1901.

Selection of time and place for next meeting.

Annual Discussion, James M. Parrott, M. D., of Kinston, Leader. Subject: "The Continued Fevers of North Carolina."

Wednesday Evening, 8.30 o'clock.

Annual Oration: "Watchman, Tell us of the Night," by T. S. McMullan, M. D., of Hertford.

Annual Essay: "The Relation of Bacteria to Disease," by R. H. Whitehead, M.D., of Chapel Hill.

Report of Committee on Pittman Prize. Award of the Prize.

Reading of the Pittman Prize Essay by the Author.

PROGRAM.

Report of the Section on Materia Medica and Therapeutics.

Some sections have not yet reported in full; but all papers will be in by the 15th of May, when the working program will be published.

Dr. D. J. Hill, of Lexington, Chairman. "The Overcrowded Materia Medica," by the Chairman.

"Automatism," by Dr. Charles A. Julian, of Thomasville.

"Should Physicians Supply the Medicines they Prescribe," by David S. Moirell, Farmville, N. C.

Report of the Section on Gynecology.

Dr. B. Ray Browning, of Littleton, Chairman.

"Endometritis, its Pathology and Symptoms, with Special Reference to Treatment," by the Chairman.

Report of the Section on Anatomy and Surgery.

A. S. Pendleton, M. D., of Warrenton, Chairman.

"The Ambulatory Treatment of Fractures of the Tibia and Tibula," by the Chairman.

"Treatment of Syphilis," by Hubert A. Royster, M. D., of Raleigh.

"An Unusual Case of Appendicitis," by M. P. Perry, M. D., Macon.

"A Report of Surgical Cases, with Remarks," by Armistead Taylor, of Washington.

"Hemorrhoids," by H. T. Bass, M. D., of Tarboro.

"Pylorectomy for Obstruction due to Adeno-Carcinoma, with Exhibition of the Patient," by Joseph H. Branham, M.D., of Baltimore, Md.

Report of the Section on Obstetrics.

N. P. Boddie, M.D., of Durham, Chairman.

"Shall we use Anesthetics and Anodynes in Midwifery," by the Chairman.

"Emergencies in Obstetrics," by A. G. Carr, M. D., Durham, N. C.

"Abortions and Miscarriages," by E. T. Dickinson, M. D., of Smithfield, N. C.

Report of the Section on Pediatrics.

Dr. John R. Irwin, of Charlotte, Chairman.

"Some Observations in Pediatrics," by the Chairman.

"Cough," by Edwin Gladmon, M.D., of Southern Pines, N. C.

"Infant Feeding," by John C. Walton, M. D., of Reidsville, N. C.

"Antitoxin and Intubation for Membranous Croup," by J. W. Long, of Salisbury, N. C.

"Laryngeal Diphtheria," by J. L. Edgerton, M. D., of Hendersonville, N. C.

"Hypertrophy of the Pharyngeal Tonsil, and its Treatment," by J. T. J. Battle, M. D., of Greensboro, N. C.

"Inanition Fever of Infancy," by R. C. Ellis, M.D., of Shelby, N. C.

"Tonsillitis Complicated with Endocarditis," by D. G. Caldwell, M. D., Concord, N. C.

Report of the Section on the Practice of Medicine.

W. O. Spencer, M. D. of Yanceyville, Chairman.

"Exploratory Incision; its Relation to General Practice," by the Chairman.

"Chronic Cystitis," by J. H. Marsh, M. D., of Fayetteville.

Western Ophthalmologic and Oto-Laryngologic Association.

The Western Ophthalmologic and Oto-Laryngologic Association held its fifth annual meeting at St. Louis on the 5th, 6th and 7th of April. The president, Dr. W. Scheppergrell of New Orleans, opened the meeting with a paper on "The Rise of Specialism", in which he disproved the oft-repeated charge that specialisms in medicine are modern innovations. He cited historical data, dating several centuries before Christ, in which distinct references were made to specialists of the eye, stomach and head. The essayist commended specialists in medicine, as they promote more detailed study and thereby lead to higher medical attainments.

Dr. J. W. Bulkard, of Pawnee City, Neb., read a paper on "Two Classes of Eye Cases that Give me a Great Deal of Trouble". Chief among them were those in which irritation and dryness of the conjunctiva persisted in spite of every attempt at refraction which had been made.

Dr. Edwin Pynchon, of Chicago, "Slight Irregularities of the Nasal Septum". The author advocated the removal or correction of slight irregularities of the septum where there were disturbances of the nasal functions on account of their presence. If late and larger developments justified their removal, the author thought their early removal was justified on the grounds of "A stitch in time saves nine."

C. R. Holmes, M. D., of Cincinnati, "Foreign Bodies of the Orbit", with the report of a case. About seventy cases were compiled from the literature and three ad-

ditional ones were reported by him. The most interesting and unique case was one reported by the author. It consisted of a knife blade about $1\frac{1}{2}$ inches long which had been in the orbit 32 years without causing much inconvenience. It was imbedded in a fibrous capsule and was but slightly rusted.

B. E. Freyer, M. D., Kansas City, "Report of a Case of Railway Trauma of the Eye with the Report of a Case and Its Legal Aspects."

M. A. Goldstein, St. Louis. "Presentation of Cases; (a) Primary Tuberculosis of the Ear; (b) Primary Tuberculosis of the Larynx." (a) The case had been operated on some years previously and had a recurrence some months ago, at which time Dr. Goldstein did the Schwartz operation. Bad symptoms developed a few weeks ago and he did the radical operation, since which time the patient is doing well. (b) The second case was one of probable primary tuberculosis of the larynx which came under the observation of the author about one year ago. At that time he was in a very serious condition; death seemed but a matter of a few weeks or months. The patient was greatly emaciated and in response to the treatment administered has gained a fair degree of health, being able to attend to business. The diagnosis in this case is somewhat doubtful, but the author having excluded luis and malignant growth, has made the diagnosis of primary laryngeal tuberculosis. Tubercle bacilli are absent and the tissue has not been examined microscopically.

Dr. Wm. L. Ballenger, of Chicago. "The Physiologic Tests of the Organ of Hearing as Aids in the Differential Diagnosis of Lesions of the Ear." The author advocated the physiologic tests of the ear, including the range of hearing, as tested with the tuning fork, Galton whistle, the Webber experiment, the Rinne experiment, the Schwaback and Bing tests, as important aids in the differential diagnosis of the lesions affecting the ear. They are of special importance in determining the location of the lesion. He suggested that in a general way the deeper the structure involved the more pronounced the disturbance of hearing and the less probability of a cure. The tests were therefore recommended more for the purpose of aiding the surgeon in giving a correct diagnosis than for the purpose of aiding him in the treatment, which is often unsuccessful. Six cases were cited illustrating lesions of different kinds in the middle ear and labyrinth, in which the tests were used for the purpose of differentiating them. He recommended that tests

be made in all cases of ear disease in which there was marked deafness and tinnitus, both before and after the inflation of the tympanum. If this point is neglected the diagnosis may not be properly made. While the physiologic tests are not absolute guides to a correct diagnosis, they are, together with all other means of diagnosis, the most correct at the command of the aural surgeon, and therefore should be invariably used.

O. J. Stein M.D., Chicago, "Symmetrical Osteoma of the nose; Report of a Case." The author reported a very rare case of symmetrical or double osteoma of the nose, occluding the nasal chambers and extending to either side for a considerable distance, whereby the patient was given the typical frog-face appearance. Osteoma upon one side is rather common. This case was presented on account of its unique type and was reported with a number of other cases collected from the literature. No attempt was made to correct the deformity, as the patient is well advanced with tuberculosis, several other members of the family having died with the same disease.

Jno. J. Kyle, M. D., Indianapolis, "The Sympathetic Inflammation and Sympathetic Irritation of the Eye." The author made an interesting review of the subject presented, in which he advocated the usual classical treatment.

Adolph Alt, M. D., St. Louis, "Studies concerning the Anatomy of the Eye Lids, Especially Their Glands (with lantern slides)." The purpose of the author was to report the result of an extensive examination made of the tissues of the eye lids, in which he had found mucous glands located in positions where they were not usually found. He also stated that in all his examinations, with one exception, the tarsal cartilages of the eye lids were not true cartilaginous tissue.

H. W. Loeb, M. D., St. Louis "Presentation of specimen of 107 Polypi Removed at one Sitting." This case was unique, not so much on account of the great number of polypi removed from the nose as from the fact that they were removed at a single sitting. They were uniformly pedunculated and varied greatly in size.

They were removed with an electro-cautery snare devised by the author.

J. O. Stillman, M. D., Indianapolis, "Removal of the Middle Turbinate for the cure of some forms of Inveterate Eye Disease." The author read a very interesting paper upon this subject in which he reported his observations as to the relationship of nasal and eye diseases and the results he had

obtained in allaying eye symptoms by the treatment of nasal conditions, more especially the removal of the turbinate.

Dr. Goldstein, as Chairman of the Local Committee of Arrangements, arranged for a museum of pathologic and anatomic specimens which, while not large, were extremely interesting and marks a new departure in this society.

The officers elected for the ensuing year were as follows:

Dr. M. A. Goldstein, St. Louis, President; Dr. Wurdemann, St. Paul, 1st Vice-President; Dr. C. R. Holmes, Cincinnati, 2nd Vice-President; Dr. Fayette C. Ewing St. Louis, 3rd Vice-President; Dr. W. L. Dayton, Lincoln Neb., Treasurer; Dr. W. L. Ballenger, Chicago, Secretary; Dr. C. R. Holmes was made Chairman of the Local Committee of Arrangements for the meeting to be held next year in Cincinnati. Dr. Loeb, St. Louis, Chairman of the Membership Committee.

Prevention of Valvular Disease in Rheumatism.

At the Clinical Society of London, March 9th, R. Caton read a paper on the prevention of valvular disease in acute rheumatism, by a method which he has systematically followed during the last fifteen years with nearly 500 patients. They were put upon a light diet and given salicylates and chologogues, and the following measures were also enforced: Absolute rest in bed for several weeks; the application of a series of small blisters, one at a time, each followed by a poultice in the course of the second, third and fourth dorsal nerve; sodium or potassium iodide in ten-grain doses three times a day. The object of the rest in bed was to protect as far as possible the softened valve-cusps. The object of the blisters was to stimulate the trophic nerves of the heart through the sensory filaments of the related skin area, and so to hasten repair and absorption, just as reparative processes are hastened by blistering the adjacent skin over an inflamed joint. The object of the iodides, to which mercury was sometimes added, was to help the absorption of the at first imperfectly organized inflammatory products in the cusps endocardium. Caton believes this treatment to be of use only in the first two or three weeks. Fifty-four patients were admitted to the hospital with a bruit apparently of recent origin. Thirty-four of them left the hospital with hearts apparently sound, while twenty were believed to have valvular disease. Thirty patients developed the first signs of valvular trouble in the

hospital. Of these twenty-seven were discharged with hearts apparently sound, and three with valvular disease. He insisted that every case of acute rheumatism should be regarded not merely and essentially as rheumatism, which is comparatively unimportant, but first and before anything else as a case of impending peril to the heart, endangering the whole future life of the patient. Whenever the heart is sound at the outset the practitioner should examine it daily. If the above-mentioned means of treatment are persisted in for six weeks, the percentage of recoveries with sound hearts will be larger than by less careful methods of treatment.—*Medical News*.

Unguentum Crede in the Treatment of Pelvic Exudate.

At the meeting of the Brooklyn Gynecological Society, June 2, 1899, Dr. John O. Polak said: I have recently been using Unguentum Credé in several cases of pelvic exudate with the most happy results. It is surprising how it reduced the temperature and diminished the exudate. In one of the cases the exudate reaches to the umbilicus, and the temperature was 102 deg., to 103 deg., F. There did not seem to be much toxemia present, and the case was one of those in which we usually prescribe rest in bed and laxatives. In two post-operative cases in which there was a temperature of 100 deg., to 101 deg., F. even after drainage was established, the ointment seemed to have a good effect upon the general condition of the patient in addition to controlling the temperature and reducing the size of the exudate. It is extremely good in cellulitis, and I believe that one man, a Dr. Jones of New York, has had the courage to use it in a case of puerperal sepsis with no other treatment. I am so well satisfied with the results obtained from the use of this ointment that I wish to call your attention to it in this preliminary report of my cases.

Dr. L. Grant Baldwin: I have had no experience whatever in the use of this ointment, but I am much interested in it, and will look forward to a further report on this method of treatment from Dr. Polak. I would like to ask him if in the cases in which he used this treatment there is pus, or whether they were merely cases in which there was a simple exudate. It has never been my good fortune to see a case of this kind in which there was no pus. If this ointment will cause the disappearance of large exudates and carry off pus without drainage it is certainly well worth using.

Dr. E. A. Day: I have had no experi-

ence in this direction. Will Dr. Polak kindly give us the philosophy of this treatment.

Dr. Polak: Dr. Baldwin's question as to whether there was pus in these cases raises a very interesting point. In the first case referred to, in which the exudate was very large, the abdominal cavity was not opened, and consequently I cannot say whether there was pus there or not. There are exudates which, whether they do or do not contain pus, will disappear after rest in bed. I have seen several cases this winter in which the patients have recovered without an operation. Still, I can say with Dr. Baldwin that I have never opened an exudate in which I have not found pus, sero-pus, or broken-down material; therefore, in cases in which the temperature reaches 103 deg., F. and remains there, the better plan is to open *per vaginam*, and drain them.

In regard to Dr. Day's question, I cannot tell him anything about the philosophy of the treatment. I believe, however, that Credé claims that this ointment has a direct bactericidal effect upon the streptococcus and communis bacillus, especially the former. I suppose it acts in the same way as antistreptococcic serum. In my hands it has certainly acted better than that has.

Dr. B. G. Baldwin: I would like to ask Dr. Polak if he refers only to cases of cellulitis or to all cases in which there is pus in the pelvis when he speaks of the patients having a temperature of 102 deg. to 103 deg. F. If the latter is the case, the point is not well taken, for many patients who have pus in the pelvis have no temperature at all. In a recent case, which is still in the hospital, we found an acute suppurative peritonitis, yet the pulse and temperature were normal, the patient walked to the hospital, and worked about the wards for a week before operation, while we were waiting until her menstruation ceased. When the abdomen was opened the pelvic cavity was found full of pus, and one of the tubes was as thick as my thumb, and contained greenish pus.

Dr. Polak: I do not mean to imply that there could not be pus in the pelvis without there being a temperature of 102 deg., or 103 deg., F.; but I do think that you will find pus, or something like pus, in those cases in which the temperature remains at 102 deg., or 103 deg., F., and does not come down more than a fraction of a degree in the morning. Of course, we have all seen cases in which there is pus in the tubes or in the pelvis, beautifully walled off, with a temperature not over 99

deg. F.—*The Brooklyn Medical Journal*, October, 1899.

Contract Practice in Massachusetts.

Massachusetts is just now the storm-center of club practice, and Springfield the immediate focus of the disorder. (Alabama Medical and Surgical Age). The secret and benefit societies, representing some four thousand members, including three thousand heads of families, are said to have found five physicians who are willing to go to Springfield under the inducements they offer. These are the salary of about \$800 from the membership fees, and the prospect of what can be made from the practice in the families of members who are not entitled to free medical treatment. It is estimated, by the societies, that this will amount to \$3,000 a year in addition to the sum above mentioned, but they are careful not to guarantee this much. In view of the fact that these society directors will not be able to call any of the regular physicians in consultation, and that they will, or ought to be, ostracised by reputable physicians, it is quite likely that they will regret their action before long. It is not likely that every one in three thousand families will willingly submit himself solely to the five selected with no chance of the benefits of any superior skill. If the members of the profession stand together, it will be only a question of time when these societies will disintegrate from their own defects at least so far as their medical practice feature is concerned. In Pawtucket, R. I., some society contract physicians who have been refused consultations have already begun to find their situation intolerable and have announced their intention of withdrawing from contract practice. This is not "trade unionism," it is simply the elimination of contract commercialism from medical practice by the professional non-recognition of those that indulge in it. The physician who puts himself at the beck and call of any one who pays a dollar a year, cheapens himself and degrades the profession, and professional non-recognition is only his desert. So far as it appears from the newspaper accounts that have reached us, no physicians of any standing have accepted these positions, which fact is creditable to our Massachusetts confreres.—*Journal of the American Medical Association*.

Dentist—"I see that I shall have to kill the nerve."

Patient—"For heaven's sake don't. It would ruin me in my business. I'm an insurance agent."

Chronic Dyspepsia Successfully Treated With H₂O₂.

By Geo. A. Gilbert, M.D., Danbury, Conn.

The case herewith subjoined is one of interest on account of its typical character, its long-standing, and its speedy recovery on the adoption of a rational treatment.

Peter H., æt. 40, Hungarian, farm laborer, applied for treatment at my office on July 1, 1899. He was a strapping fellow, mostly skin and bones, of about 170 pounds weight, and would not have been thought ill except for the prominent dark rings under his eyes, his injected conjunctivæ, and a drawn, hunted expression on his countenance, indicative of past trouble or imminent danger. The history he gave was somewhat as follows:

Six years previously, on his voyage to this country, he suffered from an attack of acute gastritis, attended with retchings of the most violent character. Soon after landing he recovered sufficiently to attend to his work; but he says he has "never been the same man since." In all this long period he has not eaten "a good square meal," nor enjoyed what he has eaten, the burning pain in the epigastrium, after meals, becoming so great occasionally that for fear of its repetition he has gone without food for two or three days at a time. Belching of enormous quantities of gas, too, is common with him soon after eating, thus evidencing the presence of undigested food with its resultant fermentation. The patient states, that in order to get relief he has spent all of his wages upon various doctors, specialists, quacks, nostrums, etc., and swears that he is worse to-day than on the day he first landed in this country.

On examination it was found that he was slightly feverish, pulse rapid, tongue flabby and heavily coated, while the teeth and entire cavity of the mouth were covered with a foul-smelling sticky mucus. That the stomach received, in the process of starch digestion, little or no assistance from the salivary glands of the mouth was plainly apparent. In deciding on the mode of treatment it was obvious that lack of the usual amount of gastric secretion must be met by restoring the physiological conditions upon which the secretion depends. In other words, in order to relieve the inflammatory condition of the gastric mucous membrane and restore the function of the peptic glands, antiseptics were required. The patient therefore was furnished with a flask of Ozonized water, made of one part Hydrozone to four parts of water, and directed to wash out his mouth every night

and morning, thoroughly cleansing the tongue, teeth and gums of the unhealthy mucus and any pathogenic germs it might contain. To destroy the microbic elements of fermentation in the stomach and dissolve the tenacious mucous there, a mixture of one ounce of Hydrozone with two quarts of sterilized water was made, and half a tumblerful directed to be taken half an hour before meals. Having thus procured a clean surface in the stomach, the patient was advised to take immediately after meals a drachm of Glycozone, diluted in a wine-glassful of water, for the purpose of enhancing cellular action and stimulating healthy granulations. Of course he was ordered to select his food with care and eat regularly.

The result of this simple procedure was magical. Although for the first two or three days there was some discomfort after eating, this soon disappeared, and at the end of a fortnight the patient reported that for the first time in six years he was enabled to eat his meals without dread of subsequent distress and eructations of gas. (In the opinion of the writer the fermentation was thus quickly subdued by the active oxidation resulting from the liberation of nascent oxygen.) The treatment was continued in this manner for another month and then gradually abandoned. On September 1st, the patient came to the office, expressed his eternal gratefulness, said that he weighed 185 pounds and believed himself to be completely cured.—*New England Monthly, December 1899.*

Caution regarding Heroin.

The April Druggists' Circular and Chemical Gazette says in substance; Under the above heading, we mentioned in our March issue two cases in which persistent vomiting followed the use of this drug, in one of which a fatal termination was at least partly chargeable to this action. These cases, as we stated in our note, were reported by Dr. Thompson in the New York Medical Journal. This report has brought to the Journal from Dr. Wm. J. Robinson, a statement of two cases in his own practice, of a similar nature. Dr. Robinson suggests that there is a possibility that heroin, which is diacetyl-morphine, may in such cases have become transformed into apomorphine or some similar body. Dr. Manges calls attention in the same journal to a statement of his in a report on a study of heroin, that "vomiting might occur after its use." He makes it a rule to tell patients that when vomiting does occur to discontinue the drug. The doses given in the

case that ended fatally he thinks were excessive. These new statements add further proof to the uncertain action of the drug; and we think that it is quite plain that it needs more watching than opiates in general. The untoward and even serious after-effects of heroin bring forcibly to mind the many excellent and time-tried remedial qualities of codeine—always safe, always certain and uniform. The combination of codeine with antikamnia presents a most desirable mode of obtaining the full value of these two excellent remedies, and there is no better form in which to exhibit them than in the well known antikamnia and codeine tablets, each containing four and three-fourths grains antikamnia and one-fourth grain codeine.

Infantile Diarrhea.

Dr. D. E. Smith, of Minneapolis (North-western Lancet, November 15, 1899) states that in cases of diarrhea characterized by copious serous discharges it is necessary to resort to some astringent which should be antiseptic and not absorbed to any extent. Tannic acid was the drug par excellence, but it has been dismissed by the profession on account of its unpalatability, its bulk, its taste, its rapid absorption in the upper intestinal tract, and its rapid decomposition. Recently a chemical combination of 87 per cent. tannic acid and hexamethylen-tetramine has been introduced under the name of tannopine, which the author considers an ideal remedy in this class of cases. It is given in small doses from three to ten grains every three hours. It does not break up until it comes in contact with the alkaline medium of the lower intestine, when the tannic acid is freed and the hexamethylen-tetramine liberates the most desirable of antiseptics, formalin. Children take tannopine readily as it is tasteless and small in bulk. It may be given either on the tongue or in any kind of nourishment. The formalin destroys the germs already attenuated by previous treatment. As soon as the serous discharge is stopped there is an immediate improvement in the patient's condition.

Always give a very guarded prognosis as to the ultimate results in deep phlegmonous processes occurring in the hand. The tendons are often immobilized within their sheaths, the muscles are atrophied, and much of their cellular tissues takes on a cicatricial character. The fingers are, therefore, apt to become stiffened in a curved, claw-like position.

A Contribution to the Therapeutics of Iron.

By Dr. Gellhorn.

The skeptical assertions of Dr. Bunge, regarding the value of ferruginous medication, at the Congress of Internal Medicine of 1895, evoked an almost unanimous and vigorous opposition in the discussion which followed the reading of his paper. The doubts expressed by him in reference to an insufficient absorption of the inorganic preparations of iron could at that time only be controverted, in the main, by the results of practical experience derived from the administration of iron. However, Quincke even then pointed out that his investigations on the subject, which had not yet been concluded, had demonstrated the absorption of iron preparations given for medicinal purposes, and their utilization in the body. In 1896, at the Congress for Internal Medicine, Quincke reported the results of his experiments which meanwhile had been completed, and which confirmed in every respect the above-mentioned statement. He had made it his aim to trace the course of iron along the intestinal canal by means of micro-chemical reactions, and for this purpose fed white mice for a number of days with cheese, to which had been added various ferruginous preparations. The animals were killed during feeding, or after the lapse of a certain interval, and the viscera, especially the intestinal canal, hardened in alcohol, cut open and examined for the presence of iron with sulphide of ammonium as a reagent. It was thus found that iron is absorbed exclusively in the duodenum, and this applies both to the iron in the food and that administered medicinally. It was detected in the duodenal epithelium and in the stroma of the duodenal epithelium and in the stroma of the villi, and is visible even to the naked eye. Furthermore, iron is found deposited especially in the liver cells, in a form perceptible on microscopical examination, and in rare cases could be detected by microscopical means in the cortical tubules of the kidneys.

These investigations of Quincke have demonstrated incontestably that the favorable results which have been obtained, since olden times, from the administration of iron are actually attributable to its absorption, and not, as Bunge would have it, to accidental circumstances, to diet alone, or even suggestion. Control experiments in this direction with indifferent medicaments are readily carried out, and were repeatedly mentioned at the Congress of 1895. It should be added that these control experiments were followed by no change, or only

by a transient improvement in the condition of the patient.

At the last Congress for Internal Medicine, the subject of therapeutics of iron was so thoroughly ventilated by the foremost clinicians, as well as numerous physicians in late years, that a new contribution would appear superfluous. This subject, however, is of such immense importance to the general practitioner, that a cumulation of material is necessary in order to eliminate the least doubt as to the efficacy of a therapeutic measure which, originating at first on the basis of speculation, and later supported by the results of empirical observations, has finally been demonstrated to be of value by exact experimentation.

In the following I will only discuss the clinical aspects of the question. I was encouraged in undertaking this work by my honored teacher, Dr. Mackenrodt, who has assisted me in every possible way. In the management of chlorosis and anæmia and the host of sequelæ of these diseases, the physician would be powerless if he had not in iron a specific, or at least a potent and indispensable adjunct to his other therapeutic resources. The patients, who belong for the most part to the working classes, give in the main the same group of symptoms: amenorrhœa, scanty or profuse, weakening, irregular, usually premature, menses; headache, anorexia and dyspepsia; neuralgias, and almost invariably marked lassitude, which interferes markedly with their ability to work. In these cases prompt and radical help must be afforded, in order to restore to the patients their full working capacity as soon as possible. It is well known that the therapeutic value of the various iron preparations differs greatly. This is shown *a priori* by the abundance of manufactured products of this kind. My experience relates chiefly to three preparations, *pilulæ chinini cum ferro*, formula *magistralis* of Berlin, *liquor ferri albuminati*, and the neutral *Pepto-Mangan* (Gude). My results with the first of these three remedies have been indifferent, while with the *liquor ferri albuminati* of the pharmacopia they were somewhat better. I have instituted accurate examinations, however, with only Gude's *Pepto-Mangan*, and the data given further on relate to this remedy alone. Owing to my limited experience with the many other preparations employed by various authors, I would not designate the *Pepto-Mangan* as a universal remedy, or as the only efficient preparation.

Still another remark: there can be no doubt that our medical intervention; no matter of what kind, is materially assisted by physical impressions. This applies es-

pecially to our female patients, who are extremely susceptible to mental influences of this character. Hence, it may readily occur at the commencement of treatment that the previous disorders are less strongly felt, and it is therefore unfortunate that an objective criterion for the existing improvement is not at our disposal, as such we would regard regular examinations of the quantity of hæmoglobin in the blood. In the observations reported these were made with Gower's hæmoglobinometer. This instrument is very convenient, and is superior to Fleischl's apparatus for the use of the general practitioner, especially on account of its cheaper cost. The tests are very exact; any existing errors are the less to be considered since they occur uniformly and in about the same degree during the entire course of the experiments.

That dietetic treatment alone may be successful in anæmic and chlorotic patients was laid down as a dictum by Immermann and Reinert at the Congress for Internal Medicine of 1895. It is natural to suppose that poor and ill-nourished persons would gain in strength under the influence of a proper and invigorating diet; nevertheless, after eight to fourteen days a cessation in the improvement occurs and the old disorders return. These authors, as well as Nothnagel and V. Ziemssen, consider an invigorating diet as only a valuable adjunct; both of the latter, moreover, regard rest in bed for several weeks as an important factor in the cure. Since several years Mackenrodt has also instituted a large series of observations of this kind, not yet published, in which, for purposes of control, he employed quantitative estimation of the hæmoglobin. It was found by him that under the influence of hygienic and dietetic regulations alone the quantity of hæmoglobin in the blood increased only at the commencement of treatment, and then only in a dilatory manner.

In the case of one of my patients I proceeded as follows: I prescribed Peptomangan (Gude), one teaspoonful three times daily after meals, and regulated the diet in accordance with the directions furnished with preparation. Sour and fatty foods, as well as raw fruits, are to be avoided under all circumstances. Fritsch (*Diseases of Women*, 1892, pp. 469) advises, indeed, that the desire for acids manifested by chlorotics should be gratified. According to my experience, however, this craving for acids is to be regarded as a pathological condition of the alimentary tract, which is made worse by further supply of acids, but can be successfully overcome by an unstimulating diet. In cases where the social

conditions in any way permitted, I allowed the patient to take a small glass of red wine three times daily, but never during a period of one hour before and after the administration of the medicament, in order to prevent the combination of the tannic acid contained in the wine with the iron. The use of potatoes was restricted as much as possible, at least, during the first four weeks. Furthermore, I resorted to the dietetic regulations customary in these cases, but changed them to advantage when, as so often happens, obstinate constipation was present, following in this respect the suggestions of Hebra, which have recently been again advocated by Ruge (*Transactions of the Obstetrical and Gynecological Society of Berlin*, I, III, 1896), and obtained generally excellent results. In contrast to several authors who made it a practice to remove any existing dyspepsia before resorting to the use of iron, I have followed the method of v. Ziemssen and Baumler, of at once administering iron—unless the presence of a severe gastric affection, especially ulcer of the stomach, could be positively determined—and observed as early as the end of one or two weeks an increase of appetite and subsidence of the gastric disorder.

I would lay especial stress upon systematic exercise in the open air. I ordered the patients, who, with but two exceptions, were treated out of bed, to take a stroll at midday, at first of five to ten minutes duration. At the end of three to four days they were allowed to remain outdoors for five to ten minutes longer.

After each walk they were advised to take off their corsets, put on their slippers, and rest for an hour on the sofa. Under this treatment the lassitude invariably vanished after a time.

In the manner thus described I have treated in all about sixty patients. In twenty-four cases I instituted quantitative estimations of hæmoglobin at regular intervals of three, five, or eight days. Under normal conditions the quantity of hæmoglobin in woman amounts to 12.59 per cent. when estimated in comparison with the other constituents of the blood. Among my cases the lowest amount met with was, in a single instance, 30 per cent. of the normal, that is to say, of the above 12.59 per cent. Next to this was the following case with 32 per cent. of the normal.

Miss W. G., twenty-two years old, seamstress, related that she had been under treatment for four years for chlorosis. Since the age of nineteen her menses had been scanty, occurring before the usual time, and of three to eight days' duration. On Sep-

tember 26, 1895, a *remotio secundinarum* occurred, after an abortion induced in the fourth month. At present she complains of darting pains in the upper portions of the lungs, headaches, and rapid loss of strength.

January 9, 1896, anæmic appearance; physical examination, especially of lungs, negative. Quantity of hæmoglobin, 32 per cent. Ordered Pepto-Mangin (Gude), diet, etc.

January 13, 1896, considerable improvement of the general condition. Hæmoglobin, 45 per cent.

January 17, since previous day, diarrhœa, due to gross errors in diet, troublesome eructations. Ordered tinct. opii. 15 drops three times daily. Hæmoglobin, 47 per cent.

January 21, improved after use of tinct. opii, no more gastric pains or eructations. Headaches have completely disappeared, lassitude less marked. Hæmoglobin, 55 per cent.

January 31, condition unchanged, ceased menstruating on previous day, the flow having lasted five days.

February 8-28, patient feels well and no longer complains of pains in the lungs. Appetite and bowels regular. Hæmoglobin, constantly 55 per cent.

March 5, no change. Hæmoglobin, 62 per cent.

March 11, Hæmoglobin, 68 per cent.

March 27, Hæmoglobin, 77½ per cent.

Unfortunately, as in most of these cases, the patient's visits ceased as soon as she felt entirely capable of going to work. As a matter of fact, the increase of hæmoglobin in this case was tardy, as in four other cases in which the quantity at the beginning was 34, 35, 37 and 38 per cent. of the normal. In eighteen other instances in which the initial amount was higher, viz: 42-75 per cent. of the normal, progress was more rapid as a rule.

This is most strikingly illustrated in the following case:

Miss C. B., aged fifteen years, complains of violent headaches, visual disorders, loss of appetite, a feeling of pressure over the stomach, constipation and general lassitude.

June 2, 1896, status præsens: mucous membranes pale; physical examination, negative; heart, normal; quantity of Hæmoglobin, 45 per cent. Prescribed as in above case.

June 9, headache has disappeared; condition otherwise unchanged. Hæmoglobin, 45 per cent.

June 16, improvement. Hæmoglobin, 51 per cent.

June 23, decided improvement. Hæmoglobin, 55 per cent.

July 8, patient free from complaints: cheeks ruddy; lips and conjunctiva red. Hæmoglobin, 78 per cent.

July 23 and September 24, continued good health.

I also derived exceedingly favorable results from the use of Pepto-Mangan (Gude) in patients who came to us for operations after having been exhausted by protracted

hemorrhages. Of course convalescence in such cases is delayed; the system recuperates but slowly from the double injury inflicted by the losses of blood and the operative intervention. Digestive disturbances are especially apt to be troublesome. In these cases ferruginous medication often produces remarkable improvement.

I cannot close this paper without calling attention to the beneficial influence exerted by Pepto-Mangan (Gude), in anæmic neuralgias, and as an illustration of its effects in this class of cases, add in brief the following history of a case:

Mrs. K., aged thirty-five years, very pale and ill-nourished, suffers from intercostal neuralgia on the left side.

January 30, 1896, quantity of Hæmoglobin, 68 per cent. of the normal.

February 5, in the mean time has suffered on two days with violent headaches; intercostal neuralgia persists; appetite good; no gastric disturbances. Hæmoglobin, 69 per cent.

February 12, no longer troubled with headaches, with exception of one attack of neuralgia, in the area supplied by the left supra-orbital nerve; paroxysms of pain on the left side of chest have become less frequent. The lassitude has subsided. The mucous membranes are still anaemic. On the whole the patient feels better and more vigorous than before the commencement of treatment. Hæmoglobin, 75 per cent.

February 18, considerable improvement of neuralgias; no headaches, nor digestive disturbances. General health improved. Menses appear earlier than previously, this being the second day of the flow. Hæmoglobin, 73 per cent.

February 26, during the preceeding days transient deterioration of her condition, owing to mental excitement. Menstrual period has been normal. Hæmoglobin not estimated.

March 2, patient no longer complains. Intercostal neuralgias have ceased to occur, except on rare occasions. Hæmoglobin, 73 per cent.

March 13, health good in general. Iron discontinued on account of gastric disturbances, which are said to result from excitement. Ordered strict diet and iron to be resumed.

March 19, complete restoration to health. Hæmoglobin, 82 per cent.

That the final estimates did not yield the normal quantity is not surprising since it is frequently somewhat reduced even in healthy persons. At any rate, the objective and subjective state of the patients in the above case, as well as in the others not reported in detail, afforded the impression that a radical cure with complete restoration of the ability to work has been effected.

It must be conceded that in matters of therapeutics it is always difficult to appreciate correctly the relation of cause and effect, and to eliminate the factor of accidents in estimating the efficiency of any plan of treatment. And in order to arrive

at a positive and unbiased decision, it is necessary to resort to a series of observations and control experiments of so great an extent that the single observer, even though he have at his disposal a vast amount of material, is only capable of furnishing a small contribution in the discussion of these questions. Furthermore, a certain amount of latitude must always be allowed to individual judgment.

Yet while fully conscious of these limitations I think I am justified in asserting that in my therapeutic trials with Pepto-Mangan I obtained all that can be rationally demanded. And I further consider myself warranted in stating that in view of the unquestionable necessity of ferruginous medication in certain troublesome constitutional affections this preparation acts as a most efficient and useful auxiliary to our therapeutic efforts.—*Therapeutische Monatshefte, May, 1897.*

Sessions of the Army Medical School Discontinued.

It is understood that the great need of medical men in the Philippines will prevent the reestablishment of sessions of the Army Medical School at the Army Medical Museum during the coming winter. The course of this school was calculated to supplement the training given by the medical colleges of the country and was of the greatest value in giving systematic instruction to young medical officers in various subjects, particularly military medicine, surgery and hygiene, and in organization and army regulations, which they otherwise learned only through long experience. It is much to be regretted that the needs of the service will not permit a resumption of the sessions of the school at the present time.—*Boston Medical and Surgical Journal.*

The American Drug Store.

The American Druggist reproduces the following from Seumas MacManus' "Impressions of America":

"I forgot to enumerate the corner drug-store in the list of ills that shorten life in America. And it does not deserve to be forgotten, for it certainly divides honors with its rival, the quick lunch. Yet, on reflection, I do believe that the latter has the heavier score to its credit. And, scientifically, it is the more interesting of the two.

"Now, I have not seen any American mortality returns, and do not know what are the proportion ascribed to the different causes of death; but after close observation and mature deliberation, I have, for my own

use, drawn up a mortality table, which I am prepared to vouch for, and from which, if the official figures differ, the official figures are decidedly misleading. Here is my table (and I challenge doubt), calculated on the basis of every 100 deaths in the Eastern States of America:

Cause.	Mortality.
Epidemic and pulmonary diseases, love, accident, murder, suicide, etc.	7.5
Coffee and meat	20.0
Corner drug-store	20.0
Quick lunch restaurant	40.0
Brooklyn trolley	11.5

Total 100.0

—*The Dietetic and Hygienic Gazette.*

Medicine as a Profession.

D. John M. Dodson, in an address recently delivered before the Sunset Club of this city (Chicago) said that in this country there is about one doctor to every 600 of population, while in foreign countries the ratio is about twice as high. The average salary of a physician in a large city is approximately \$2,000 a year, while in the country districts the average is about \$1,000 a year. To a young man studying the proposition of entering a profession, if he has merely the question of making money in mind, there are other walks of life which offer larger inducements. The highest possible return that he knows of in the profession is about \$80,000. There are two doctors in Chicago who makes more than \$50,000 annually, 10 who makes more than \$25,000, and 100 who make from \$10,000 to 20,000 each year. The opportunities for original research and investigation are great. There has been a great advance in medical education, but there is much for the profession to learn, and one of the most important things is preventive medicine. He believes the time is near at hand when the physician will be paid by his client not alone for the curing of disease, but for its prevention.—*Medical News.*

An attack of appendicitis may be a mild one, but, if it is, the surgeon does not know it until the attack is over. As long as the attack lasts severe symptoms may arise at any moment. So-called mild cases often have remarkably rapid fatal results. The only rule to follow is that if the severity is increasing, operation is immediately necessary, whereas if it is distinctly diminishing, we are justified in waiting.—*International Journal of Surgery.*

An Excursion of Normal P. Appendectomy.

The St. Louis Medical Review (March 17) sent out Normal Prophylactic Appendectomy with letters of introduction to "a majority of the best surgeons of this country." Among eighty-nine surgeons, one, a Kentuckian, bowed down to the man of straw, while another, a Cincinnati surgeon, made thirteen rachitic genuflexions. Half a dozen asked it to call again when the appendices were out, and the rest more or less respectfully kicked it. Two spoke Greek to it, and Dr. Howard Kelley, always polite, spoke of speaking Greek, but didn't. Many called it hard names, as they should not have done, seeing that it had good clothes and a respectable introduction. The story of its adventures fills fourteen pages, though the country was saved before the St. Louis surgeons were through with it. A surgeon in Nebraska said to it, "Let us have peace," and it replied, "Baldheaded colons are the price of epityphlitic peace." Over its pathetic remains the editor pronounced a noble threnody.

This important question being now settled, we escape the necessity of further inquiry as to how many icemen would, if N. P. Appendectomy held the field, be reduced to the practice of surgery for a livelihood.—*Maryland Medical Journal*

Treatment of the Navel.

The chief principles to be observed in the treatment of the navel following birth are, according to A. Ahlfeld (*Centralbl. f. Gyn.*, No. 13, p. 337), shortening of the cord to the recognized minimum, touching up the stump and vicinity of the navel with 95 per cent. alcohol, then placing a layer of sterilized cotton which is to remain on for five or six days, only being removed in case of its becoming moist with urine. Especially may it be noted that after the birth of the child the cord is to be cut about 3 to 4 inches from the navel, after carefully tying it off with linen tape. Then, after the bath, the secondary shortening is to be performed. This consists in tying off the cord about 2-5 inch from the navel and a little beyond this the cut is made. Now the aforementioned moistening with alcohol is to be done and the sterile cotton wrapped over it. The author never uses silk ligatures for tying off the cord, as it frequently happens that a hematoma of the cord follows a too tightly applied silk thread. The suggestion that a cautery-scissors be used to cut off the cord about one-half inch from the child's abdomen, Ahlfeld scores as being too dangerous in its application.—*Medical News*.

Vaginal Douching.

In Gould's Year Book of Medicine and Surgery for 1900, Byron Robinson, M.D., of Chicago, Ill., in advocating the use of vaginal douching says that when properly used it is capable of doing a vast amount of good, but much depends upon the amount of the fluid, the degree of heat, etc. He advises a fountain syringe with a four foot lead and holding at least four gallons and at a temperature of 103 degrees Fahrenheit, and increased until as hot as can be borne. Begin with three quarts and increase one pint a day until four gallons are taken. He also advises that some astringent preparation be used to check waste of secretions. For this purpose Micajah's Medicated Uterine Wafers are especially useful. They are astringent in action, thus contracting the vessels and tissues, and they check waste of secretions. They prevent reaction after douching and stimulate the mucous membranes. They are antiseptic and should always be used in connection with the vaginal douche for the above reasons.

Dishonest Doctor Convicted.

Dr. Adolph Zeil, of Berlin, was found guilty on April 2nd of the charge of having made money by incapacitating young men for military service. His plan was to administer on the day before the examination such drugs as would accelerate the heart's action. The prospective recruit would be rejected on the ground that he was suffering from heart disease. Zeil had "treated" 350 in this way. He was sentenced to one year's imprisonment and the various civilians and military surgeons who were implicated were each sentenced to a few months' imprisonment.—*Medical News*.

W. C. Frederick, M. D., Lono, Ark., says: I have used S. H. Kennedy's Extract of *Pinus Canadensis* (Dark), one to three of water, in sore throat from cold, with splendid results, and have now under treatment a little boy, three years old, suffering from strumous diathesis, who has been afflicted over a year with otorrhea. Have been using as an injection two drachms of S. H. Kennedy's Extract of *Pinus Canadensis* to four drachms of water, three to five drops; two or three times a day, the ear previously cleansed with castile soap. The little fellow commenced to improve from the very start, and is rapidly improving daily; the discharge has almost ceased. He has been on this treatment for about two weeks.

A Thoughtless Public.

Dr. Butler, in the Doctor's Magazine for March, calls attention to the unfamiliarity of people generally with the infinite detail necessary to the completion of scientific researches and to the accumulation of scientific facts. There is, however, for the medical profession a view of this condition even more direct. The people of any community seem to have been taught to expect that because in any emergency a physician may be summoned at the call of anyone, that he is so much their servant they may consider lightly the question of his reward. An incident of this sort which is worth relating is that of a family in poor circumstances to whom a physician had ministered faithfully, over a period of eight or ten years, in the capacity of family physician, and who had paid him during that time not more than a few dollars. A few days since the mother of this family appeared in the office of the physician for further council and treatment, but this time wearing a pair of new glasses, for which and two day's treatment she admitted having paid \$25 to a quack oculist. Virtue may be its own reward, but to a physician who has labored faithfully in the care of a woman and her children and who sees the fees that belong rightfully to him go to a man whose only hold upon the people is through his support of their daily paper, it is adding more drops of the bitterness that comes into the cup of every member of the profession.—*West. Medical Journal*.

Conditions Which Make the use of Diphtheria Antitoxin Imperative.

It is not necessary for us to call attention to the fact that diphtheria antitoxin should be used in every case of diphtheria, and in every case of membranous croup—in every case of diphtheria because it has been proven beyond all doubt that this remedy affords us a better means of producing a cure than any other method which has ever been introduced; and in membranous croup because the great majority, if not all such cases, are in reality diphtheritic in character. As the antitoxin is devoid of harmful influence there is every reason why it should be employed, and no reason why it should not.

While the profession has generally recognized the immense value of this remedial agent in diphtheria of the pharynx and fauces, and while many of them recognize also the fact that in laryngeal and nasal diphtheria it affords the only satisfactory method of treatment, we desire at this time to call attention to the fact that in certain proportion of the cases of diphtheria the

disease does not at first attack the pharynx and fauces, but begins upon the nasal or laryngeal mucous membrane, and so influences the larynx that it speedily produces symptoms of respiratory obstruction in addition to those which are caused by the absorption of the toxin of the disease. Many of these patients become distressingly ill before the fact is recognized that the stridor and husky voice are due to laryngeal infection, because the membrane cannot be seen unless the physician is skilful in the use of the laryngoscope.

The point we wish to make is that in all these cases where laryngeal obstruction rapidly comes on in a young child, and where a laryngoscope examination is not possible, the physician should at least employ diphtheria antitoxin tentatively, and at the same time sufficient quantities (500-1000 units) to really exercise a therapeutic influence,

Stridor and laryngeal obstruction may, of course, arise from spasmodic croup, or it may complicate rickets, but on the other hand it is frequently met with as a result of laryngeal disease of the type that we have named.

Our attention has been called to this important matter both by our own experience and by letters received from various correspondents, notably one which has come to our hands from Dr. J. A. Jackson, of Madison, Wisconsin.—*Therapeutic Gazette*.

The Boer and Briton.

The war in South Africa has enabled us to draw a comparison between the physical and moral condition of a republic, isolated to a certain extent in the wilds of the dark continent, only a small part of which has yet been opened to civilization, and that of one of the oldest and most advanced in civilization in the world. The London Lancet in discussing the question states in the most emphatic terms that the physical and moral superiority of the Boer, man for man, is vastly superior to the Briton. The reasons are obvious. The Boer lives in the open air. The houses are far apart, necessitating long rides or walks to meet each other. He is comparatively free from temptation, and his life in every respect, in business and socially, one of moderation. He knows nothing of the dissipation of the rich nor the squalor of the crowded tenement of the poor. The Boers are taller and stronger physically than the English, less nervous, more temperate and capable of much greater endurance. Even in cities the Boers practice the primitive rule of early to bed and early to rise. President Kruger goes to bed

at eight and rises at nine. Drunkenness is comparatively unknown, and sexual diseases exist only to a limited extent. "How frequently," says the Lancet, "on the other hand are British soldiers incapacitated by sexual diseases and punished for drunkenness. No wonder that nearly every Boer is not only able to serve in war, but is healthier and stronger than the men picked for the army by our doctors. If all our male population between the ages of fourteen and sixty were called out, what a sorry spectacle it would make, compared with a similar Boer force. The British army is an infinitesimal minority of selected men, especially fitted to be soldiers. It is easy to imagine what would happen if all our men were called to arms. Victory in modern war is with the people who have the best sharpshooters. Psychologically that means the people who have the strongest nerves. To remain cool, quiet and capable in battle is the main requirement. To this must be added the ability to stand exhausting marches in which, doubtless, the countryman is better fitted than the townsman." The picture drawn by the Lancet of the two peoples, the Boer and the Briton, is a most telling one, teaching a lesson of frugality, of physical training and of freedom from those vices which sap the strength of any community which, if rigidly read and practically followed, will offset in real value far more than the loss and suffering of the entire war. If England conquers and absorbs these little republics, which have shown such heroic valor, as she undoubtedly will, it will be by the power of numbers, accomplishing by the strength of its armies what it could not have done if the forces were in any respect numerically equal.—*Medical Times*.

A Needed Insurance System.

In view of the many suits that are brought against practitioners for malpractice—the great majority of which are ill-founded, and many of which savor at times of attempts to blackmail—surgeons are beginning to realize the need of some sort of protection. This can only be brought about by an organized effort on the part of the profession to build up some system of insurance against suits for malpractice. A surgeon who could immediately refer claimants to some powerful organization that should be ever-ready to undertake the legal defense against such suits, would be greatly protected against unjust claims, which, we are fully persuaded, are in the majority of those that are presented. Such insurance would save any amount of worry, and de-

fend its members against a very real danger. A suit, however unjustified and certain to be defeated, is always a most costly affair, and many are the men who, while realizing the unfairness of the demands made upon them, have settled them out of court, in order to avoid the expense of even a winning case, and the unpleasant effect upon the public of any alleged malpractice. In those cases in which the demand was justifiable, a strong insurance company would often be able to adjust matters without litigation, thus saving expensive legal procedures, and could employ special talent, both in medicine and law, in the conduct of its cases. Where the malpractice has been real, the bad result achieved must often be looked upon in the light of an unfortunate accident, for which even the best of us may at times be more or less responsible. The insurance company could protect itself against habitual negligence and incompetency by refusing to insure any member after his conduct of a case had once shown gross neglect or lack of proper skill and knowledge. From a practical standpoint it might be quite possible for medical practitioners themselves to undertake the creation of such an insurance system, but it would seem that the easiest way would be to interest some of the already existing accident insurance companies in such a scheme.—*International Journal of Surgery*.

Read Newspapers and Study.

Our advice to young men is to study politics all the time. Begin now to keep the run of the current events, not only at home but abroad. Watch the struggle in France, which now presents a scene of stirring interest, as the threatened revolution approaches, with Boulanger rising above the angry surges of the troubled waters. Mark the progress of the home rule idea in the British parliament, and especially the part that the "grand old man" is taking in it. Note the attempts that are made to establish civilization and Christianity in Africa. In order to do this you must do more than read the newspapers carefully. You must delve into history. You should also read carefully the best works you can find about the science of government. The political parties in our own day present a study well worth watching carefully. Above all, make it a point to analyze motives, separate the good from the bad, carefully make up your mind as to what is right, but do not blind yourselves to the faults in your own party; make it a rule of your life never to do in politics anything that you would account wrong in business or social life. Any young man

who views the passing struggles of men and parties from the high plane of intelligence and virtue will not only be a credit to himself and his party, but will be as good to the nation—*Kansas City Medical Index-Lancet*.

Disinfection After Measles.

In many cities of America the Boards of Health lay so little stress on requiring physicians to report cases of measles that this duty of the medical attendant is often entirely neglected. In speaking on this subject before the Académie de Médecine, M. Valin said that the infectious disease which at this time has the greatest mortality in Paris is not diphtheria nor typhoid fever, but measles. While other infectious diseases are decreasing in both frequency and virulence from year to year, measles is on the increase. This he attributes to the fact that measles is not there included among the infectious diseases which must be reported to the health authorities, and after which disinfection is required. Many physicians hold that disinfection is quite useless after measles. M. Valin says that even if disinfection is useless, a fact which has not been established, it will at least serve to kill germs, such as the staphylococcus, pneumococcus, etc., the association of which with the microbe of measles, causes such fatal complications. It also serves to keep the public from getting the idea that no precautions need to be taken against this disease.—*Pediatrics*.

Pigmented Tumor of the Eyeball: Death from Multiple Pigmented Carcinoma nearly Fourteen Years after Excision of the Eye.

(British Medical Journal, report of the meeting of the Ophthalmological Society, March 8, 1900). Mr. Herbert Fisher and Dr. Charles R. Box related a case of primary pigmented tumor of the eyeball, for which the eye was excised in 1885, the patient being a man at that time aged forty-two. In 1899 he was readmitted into St. Thomas's Hospital with great enlargement of the liver, accompanied by jaundice, abdominal pain, sickness and diarrhoea, and œdema of the lower extremities. For fifteen months the abdominal swelling had been progressing, accompanied by general weakness and loss of flesh. The patient died, and a post-mortem examination showed that the liver was almost replaced by a nodular mass of melanotic growth weighing 12 lb. 6 ozs. There were also a few pigmented growths in the left parietal

pleura. A small pigmented growth the size of a pea sprang from the myocardium and projected into the right ventricle. Microscopic examination of the growths in the liver proved them to be melanotic carcinoma and not sarcoma, as had been expected. Mr. Treacher Collins reported that the growth had originated in the ciliary processes, and extended thence into the iris and through the sclerotic. The cells were pigmented to a varying degree; they were small polygonal and of an epithelial type, and from their arrangement in rows Mr. Collins gave it as his opinion that this growth was carcinomatous in character. It was decided to submit the secretions to a pathological committee of the society for further examination and report. Mr. Devereux Marshall, while expressing no opinion as to the nature of the primary growth, said he had never heard of a case in which a true cancer had remained dormant for fourteen years, though he had seen and published a case in which a patient had died of metastatic sarcoma eleven years and five months after an eye had been removed for sarcoma.—*Treatment*.

A New Adhesive Material.

An original contribution to our knowledge of pathology was found in a recent examination at a medical college not a thousand miles away. In a description of healing by first intention the statement was made that "in a clean incised wound the parts are brought together, the excessive hemorrhage is stopped, and the two surfaces glued together with a solution of continuity."—*Colorado Medical Journal*.

"How do you like your new typewriter?" inquired the agent.

"It's grand," was the immediate reply. "I wonder how I ever got along without it."

"Well, would you mind giving me a little testimonial to that effect?"

"Certainly not. Do it gladly." So he rolled up his sleeves and in an incredibly short time pounded out this:

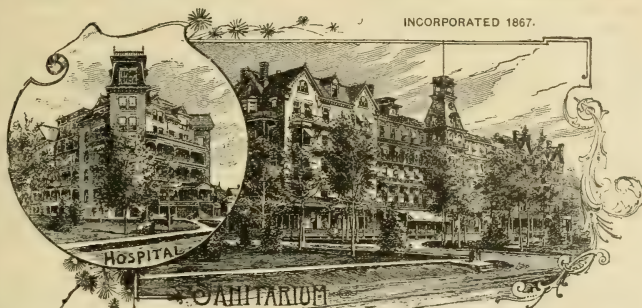
"After Using the automating Back-action a type writer for thre emonth and Over. I unhessttattingly pronounce it pronce it to be al even more than the Manufacturs Claim? for it During the time been in possession e l. th ree month zi id has more than paid for itself in the saving of it an labor.—Johh \$ Gibbs."

"There you are, sir."

"Thanks," said the agent, and most quickly went away.—*Medical Visitor*.

THE SANITARIUM, BATTLE CREEK, MICH.

INCORPORATED 1867.



CHE largest, most thoroughly equipped and one of the most favorably located in the United States. It is under strictly regular management. Eight physicians, well-trained and of large experience. A quiet home-like place, where "trained nurses," "rest-cure," "massage," "faradization," "galvanization," "static electrization," "Swedish movements," "dieting," "baths," "physical training," and all that pertains to modern rational medical treatment can be had in perfection at reasonable prices. Special attention given to the treatment of chronic disorders of the stomach, and diseases peculiar to women. A special hospital building (100 beds) for surgical cases with finest hospital facilities and appliances.

Large fan for winter and summer ventilation. Absolutely devoid of usual hospital odors. Delightful surroundings. Lakeside resort. Pleasure grounds, steamers, sailboats, etc. Trained nurses of either sex furnished at reasonable rates.

J. H. KELLOGG, M. D., Supt., Battle Creek, Mich.

RUT-GLUTEN BISCUIT: Made from the purest wheat gluten and nut meal. The only food on the market to-day that diabetics may eat of freely, without danger. Prescribed and endorsed by the physicians of the Battle Creek Sanitarium. Samples free to physicians when card is enclosed with the request. Others may have them for two 3c stamps.

BATTLE CREEK SANITARIUM HEALTH FOOD CO., Battle Creek, Mich.

Urotropin as a Urinary Antiseptic,

At the meeting of the Leeds and West Riding Medico-Chirurgical Society, March 2d, 1900, Dr. Cammidge, after briefly referring to a case of cystitis complicating enteric fever in which Urotropin had proved beneficial, gave details of investigations which he had carried out on the action of Urotropin and Urotropin urine on the *B. typhosus*, the *B. coli communis*, and the *staphylococcus pyogenes aureus* under various conditions. He also described some chemical experiments designed to determine the mode of exertion of the drug in the urine, and the cause of the marked antiseptic and inhibitory powers over the growth of micro-organisms possessed by such a urine. The results of these experiments seemed to show that although this action was probably in part due to the Urotropin itself, excreted unchanged in the urine, another and more powerfully inhibitory substance was present. The author did not think this was free formaldehyde, but thought it possible that it might be a sodium compound formaldehyde as suggested by A. Citron. There was both clinical and experimental evidence tending

to show that one condition necessary for success in using the drug as a urinary antiseptic was that the urine should be acid in reaction as it was secreted in the kidneys. Stress was laid on the marked inhibitory action of Urotropin, and still more of Urotropin urine, on the typhoid bacillus; and it was pointed out that there was a wide field of usefulness for Urotropin, both in the treatment of cystitis and other conditions liable to complicate enteric fever, and as a preventive against the dissemination of typhoid bacilli by the urine. He suggested that all patients suffering from enteric fever should receive 10 grains of Urotropin three times a day from the end of the second week on during convalescence. Reference was also made to the usefulness of the drug in the cystitis accompanying enlarged prostate and stone, as well as the benefits to be derived from its administration in bacteriuria and some cases of nocturnal enuresis in children, and in preparation for operations on the urinary tract.

Drs. Gordon Black, Churton, and Trevelyan took part in the discussion which followed, and Dr. Cammidge replied—*British Medical Journal*,

Ever Thus and Always Will Be.

There was a man, it was said one time,
Who went astray in his youthful prime.
Can the brain keep cool and the heart keep
quiet

When the blood is a river that's running
riot?

And the boys will be boys, the old folks say,
And the man is the better who's had his day.

The sinner reformed and the preacher told
Of the prodigal son who came back to the
fold.

And Christian people threw open the door.
With a warmer welcome than ever before.
Wealth and honor were his to command,
And a spotless woman gave him her hand.
And the world strewed their pathway with
blossoms abloom.

Crying, "God bless ladye, and God bless
groom."

There was a maiden who went astray
In the golden dawn of her life's young day.
She had more passion and heart than head,
And she followed blindly where fond Love
led.

And Love unchecked is a dangerous guide
To wander at will by a fair girl's side.

The woman repented and turned from sin,
But no door opened to let her in.

The preacher prayed that she might be for-
given,

But told her to look for mercy—in heaven.
For this is the law of the earth, we know:
That the woman is stoned, while the man
may go.

A brave man wedded her after all,
But the world said, frowning, "We shall
not call."

—*Ella Wheeler Wilcox.*

On Medicaments in Phthisiotherapy; Duotal.

Every practitioner is probably well aware of the difficulties that occur with some frequency during a long continued course of creosote treatment. In many cases it has to be discontinued, in spite of its indubitable disinfectant properties, in consequence of these obstacles. In Duotal we possess a drug that has all the advantages of creosote, without its deleterious effects.

Duotal Von Heyden is 90.5 per cent. of pure guaiacol chemically combined with carbonic acid. It is a white, crystalline, odorless and tasteless powder, insoluble in both hot and cold water, and it can be taken without causing any difficulties whatsoever.

For experimental purposes it was administered to a series of patients at the "Heilanstalt Alland." They were chiefly those

in whom there was no improvement in weight, in spite of treatment, in consequence of the anorexia.

The mode of administration was the following: During the first four or five days a single dose of 0.5 gram ($7\frac{1}{2}$ grains), in a wafer, was given once daily after dinner. Then the dose was doubled. A few days later 1.5 grams ($22\frac{1}{2}$ grains) was given daily, divided into three doses. Finally the daily amount was slowly increased up to 4.0 or 5.0 grams (60 to 75 grains) and at this point it was maintained for a considerable period of time.

Thirty-two persons altogether took the drug for two months each, two of them being ambulant patients.

In five of these cases the Duotal treatment was stopped after three weeks, because the patients' appetites got worse. In all the other cases there was a marked improvement in the appetite. In the two ambulatory cases there was an increase of weight in 14 days of 1.6 and 1.4 kilograms ($3\frac{1}{2}$ lbs. and 3 1-10 lbs) respectively. Twice we obtained a good result when obstinate constipation was present. After four weeks' administration of the Duotal in the above doses the movements of the bowels became regular.

One patient, who began with daily doses of 1.0 gram (15 grains), after four days took a single daily dose of 3.0 grams (45 grains) for a long time. He had suffered from very marked loss of appetite; but it became good after ten days of the treatment, and in four weeks his weight increased 3.0 kilograms ($6\frac{3}{4}$ lbs.). Another female patient entered the institution weighing 51.4 kilograms (113 lbs.). During four weeks of other treatment her weight had not increased. Duotal was then prescribed, and in as short a time as eight days thereafter her weight was 52.7 kilograms (116 lbs.).

In consequence of its stimulating effect upon the appetite Duotal is to be highly recommended for hospital and private practice; and even in the special institutions for the treatment of the tubercular disease it is a very valuable aid to the general dietetic and hygienic treatment.—*Wiener klinische Wochenschrift.*

"What happens to be the matter with your father?" inquired the doctor, as he hastily put his clothes on.

"He's got the lumbago," replied the boy. "I think that's what maw says it is."

"Pain in the small of the back, I presume," said the doctor.

"No, sir; he hain't got no small of the back. My paw weighs 284 pounds."

Rockbridge, Va., Alum Water.

That are of Intrinsic Value to the Medical Profession.

Extract from a paper read before the Atlanta Society of Medicine, April 26, 1887, by JOHN S. TODD, M. D., Professor Materia Medica and Therapeutics, Atlanta Medical College, Ga.; Ex-President of Georgia Medical Association; not read in our interest, but in the interest of Science and his profession:

"Some four and a half years since I had, among other cases, one of dysentery, which resisting all medication, became chronic, and a LARGE ULCER OF THE RECTUM DEVELOPED. I called in consultation a noted surgeon. The patient's condition was one of extreme emaciation; blood and mucus in large quantities were voided about an average of once an hour. The dose of opium had been increased to 3 dr. laudanum in twenty-four hours and $\frac{1}{2}$ gr. morphine twice a day, and still matters grew worse. We decided to inject solution 30 grs. to oz. nit. silver in rectum. The result was a COLLAPSE that nearly proved FATAL. Upon it being suggested later that the operation be repeated, the patient, a young man, said if we and his family insisted, to avoid it HE WOULD COMMIT SUICIDE. Dr. W. S. Armstrong was then called in with me. He suggested an exclusively milk diet, gradual reduction of opium, and ROCKBRIDGE (VA.) IRON AND ALUM WATER. Immediate improvement set in, and in TEN DAYS so great was THE CONSTIPATION that oil and enemata had to be resorted to to procure an evacuation from the bowels. Since that time I HAVE TREATED SEVERAL CASES EQUALLY AS BAD, WITH SAME HAPPY RESULT, using same diet and medicines, for of all agents for this disease, I consider THE ROCKBRIDGE ALUM AND IRON WATER THE FIRST. It is equally EFFICACIOUS IN CHRONIC DIARRHŒA, AS MY RECORDS ATTEST."

DR. TODD, March 21, 1900, writes: I have for 16 years used these GRAND WATERS constantly in my practice with increased and increasing satisfaction. I inclose you article written 3 years ago on opium. "In chronic diarrhœa and dysentery, the milk diet, ROCKBRIDGE ALUM WATER, and small doses of opium given cautiously—very cautiously lest your patient acquire the opium habit—has proved so INVARIABLY SUCCESSFUL with me, that I have COME TO TREAT THESE CASES WITH A CONFIDENCE BORN OF SUCCESS."

DR. HUNTER MCGUIRE, Virginia's great surgeon, says: As an astringent and tonic it is one of the most valuable I have ever used.

DR. S. GAILLARD THOMAS, Professor College of Physicians and Surgeons, N. C.: "Most efficient astringent and tonic waters I have ever employed."

Write JAMES A. FRAZIER, Mgr. Receiver, Rockbridge Alum-Springs, for Pamphlet.

Nature's Needs.

A brief consideration of what may be termed the physiology of disease will throw much light on the subject of the needs of nature in the period following the subsidence of the symptoms.

Symptoms may be said to be intensified physiological functions accentuated to such extent as to constitute abnormalities. This is true of fever, pain and the whole host of symptoms ascribable to special organs and tissues. Emaciation and nervous exhaustion ensue because the processes of disease, requiring as they do fuel for increased oxidation, deplete the patient of nervous force and tissue structure. Nature's method of repairing waste—by food—is prevented, because the digestive organs share in the general enfeeblement consequent upon disease. The patient has neither the inclination to eat or the physical powers necessary to digest and assimilate food.

It is in just this class of cases that the restorative effects of Gray's Glycerine Tonic Comp. are most pronounced. Because of its alterative, tonic action upon the gastric mucous membrane, it takes hold of the dormant, torpid nutritive functions and stimulates them to normal physiologic activity. Appetite is engendered, atonicity

of the digestive functions is abolished, and the patient is able to eat, and assimilate a sufficient amount of food to replace waste of tissue, impoverishment of blood and depletion of nervous force. It thus duplicate and reinforces Nature's recuperative powers; hence the value of Gray's Glycerine Tonic Comp. in convalescence from a la grippe, typhoid fever, malaria, pneumonia, etc. It can always be relied upon to effect the desired results in all forms of anemia

The Dosage of Orphol.

Communications upon the subject received from physicians lead us to believe, that Orphol is often exhibited in quantities too small to produce the best results.—Bearing in mind the innocuous nature of the drug, the rapidity of peristalsis in most cases in which it is indicated, and the amount of material to be disinfected, the remedy should be given in relatively large doses (10 to 15 grains for adults) and frequently repeated. In all instances in which the faecal discharges are unduly offensive it should be vigorously pushed until the stools are completely deodorized.

SCHERING & GLATZ.

58 Maiden Lane, New York.

The Purity of Chloroform.

We have in these pages periodically drawn attention to the great desirability—nay, necessity—of a purer chloroform than that which we are accustomed to in this country, and if we do so again it is only because it is a subject of no ordinary importance, and one which is a matter of life and death, and should, therefore, not be ignored or neglected. If it was the fact that chemistry could not bring forth a product purer and more reliable than the so-called pure chloroform, made of alcohol and chloride of lime, or else of acetone, we could dismiss the question by simply regretting that so important an anæsthetic could not be had of greater purity and more free from fatal result in medical practice; but when it is merely a question of economy, of either using a product supplying so many fatal issues as we are accustomed to meet with in hospital or private practice, it is surprising that no more notice is being taken of the purer form of chloroform known, in science, as Schering's Chloral-Chloroform. We grant that it is a far more expensive product than the purest chloroform we are accustomed to in this country, where also the Excise makes itself felt to the disadvantage of the cost; but notwithstanding this, it seems wrong that, more especially in critical operations, the cost of that little quantity required can possibly be made an excuse for not administering the purest of the pure chloroform.

Let us again consider what claim Chloral-Chloroform has on that high degree of purity which we recommend as preferable and indicated in so many cases where the hitherto reputed pure chloroform fails. To understand this, we must remember that the chloral-hydrate of the British Pharmacopœia dissolves quite bright and clear in water, and has, moreover, the characteristic that when boiled in sulphuric acid it remains undecomposed, while all other chlorinated products would thereby be decomposed. We have, therefore, here an initial product of unique chemical purity and characteristics, which, when treated with lime water, must also supply an absolutely pure and far preferable chloroform.

It is totally different in the case of the chloroform with which we are accustomed to in this country. In the manufacture of chloroform from chloride of lime and alcohol it is impossible to avoid the chlorination of the impurities present in the raw materials, and these foreign chlorine-combinations are extremely difficult to remove. The shaking up of such impure chloroform with sulphuric acid is not sufficient to remove these foreign chlorinated products;

they are only destroyed by heating with sulphuric acid, but this, however, equally affects the chloroform. Chloroform thus treated reacts acid even after the most careful washing, and has the peculiar odour of the dangerous phosgene gas.

If it is intended to purify chloroform by distillation (fractionally) at a certain degree of temperature, it is necessary to make use of a very accurately working fractionizing apparatus, as otherwise it is quite impossible to remove the products of impurity from the chloroform, and comparatively large quantities of liquids, possessing lower or higher boiling points, are obtained, for which a suitable employment in chemistry is not always easily found.

Chloral-Chloroform evaporates rapidly, though constantly, and without trace of odour or oily residue. Covered with sulphuric acid, it will remain for hours without showing, at the zone of contact, the least discoloration, and shaken up with water, the latter will not react acid, nor will it opalize with nitrate of silver solution.

The great advantage of Chloral-Chloroform is that it may be kept for several years, more especially if mixed with $\frac{1}{2}$ to 1 per cent. pure alcohol, and lodged in a glass. Even sunlight will not alter it.

The only drawback of Chloral-Chloroform is, that the cost of the dearer intermediate product, and Her Majesty's Excise, make it rather expensive (the duty into this country alone being 3s. 3d. per lb.) Yet no practical medical man, and more especially the operating surgeon, will fail to appreciate the advantages of a reliably pure chloroform over the ordinary product, in the use of which we have so many fatal records.

It is notorious that, in consequence of the inferior quality of the more generally used chloroforms, many medical practitioners are falling back upon the long-discarded anæsthesia by ether. The use of Chloral-Chloroform has, therefore, a well-substantiated claim for notice; and, furthermore, one feels inclined to think that if more time and energy had been utilized for advocating the use of purer chloroform, rather than to invent new apparatus for administering the impurer product, less would be heard of the dangers of chloroform as a general anæsthetic—*The London Therapist*.

A girl went into the shop of a Brisbane chemist and wanted a toothbrush, and "would he please give her a hard one as there were six in the family?"—*Chemist and Druggist*.

LISTERINE

The word Listerine assures to the Medical Profession a non-poisonous antiseptic of well proven efficacy; uniform and definite in preparation, and having a wide field of usefulness.

On account of its absolute safety, Listerine is well adapted to internal use and to the treatment of Catarrhal Conditions of the mucous surfaces.

LITERATURE DESCRIBING THE BEST METHODS FOR USING

Listerine in the Treatment of Diseases of the Respiratory System

WILL BE MAILED TO YOUR ADDRESS, UPON APPLICATION.

We beg to announce that, in addition to the 14 oz. bottle, in which Listerine is offered to the trade, the pharmacist can now supply a smaller package, containing 3 fluid ounces, which is put up for the convenience of practitioners who prefer, upon certain occasions, to prescribe articles of established merit in the Original Package, under the seal and guarantee of the manufacturer.

FOR DISEASES OF THE URIC ACID DIATHESIS:

Lambert's Lithiated Hydrangea

RENAL ALTERATIVE--ANTILITHIC.

The ascertained value of Hydrangea in Calculous Complaints and Abnormal Conditions of the Kidneys, through the earlier reports of Drs. Atlee, Horsley, Monkur, Butler and others, and the well-known utility of Lithia in diseases of the uric acid diathesis, at once justified the therapeutic claims of LAMBERT'S LITHIATED HYDRANGEA when first announced to the medical profession, whilst subsequent use and close clinical observation has caused it to be regarded by physicians generally as a very valuable Kidney Alterative and Antilithic agent in the treatment of

Urinary Calculus, Gout, Rheumatism, Cystitis, Diabetes, Hematuria, Bright's Disease, Albuminuria, and Vesical Irritations Generally.

Realizing that in many of the diseases in which LAMBERT'S LITHIATED HYDRANGEA has been found to possess great therapeutic value, it is of the highest importance that suitable diet be employed, we have had prepared for the convenience of physicians,

DIETETIC NOTES.

suggesting the articles of food to be allowed or prohibited in several of these diseases. A book of these Dietetic Notes, each note perforated and convenient for the physician to detach and distribute to patients, supplied upon request, together with literature fully descriptive of LAMBERT'S LITHIATED HYDRANGEA.

LAMBERT PHARMACAL CO., ST. LOUIS.

The Physiology of Osteopathy.

Some time ago Major G. W. H. Stouch slipped and fell on the icy pavement in front of St. Mary's church in Denver. Not having much faith in treatment at the hands of regular practitioners, he called in an osteopath. The final result not being too good, he sued the church and the city for damages. The defence was that the permanent injuries were due to treatment rather than the original lesion and the jury brought in a verdict for \$1 damages.

The Denver Evening Post of February 23 said:

Speaking on this point, W. L. Harlan, doctor of osteopathy, said to-day:

"Some errors have crept into the case of Major Stouch. He had only one broken bone in the arm, the humerus, and certain of his ribs were dislocated. Then it was understood that the osteopath sought a cure by simply manipulating the patient's fingers, whereas the opposite fact was true.

"The parts were adjusted by manipulation with the fingers. The circulation is what we are after, as perfect circulation through the parts affected will work the cure desired. These parts will take from the blood all the building up of the parts that is necessary, and this is how in the case of a fractured bone the bone is knit together. We pursue the same course in the case of broken ribs; we set them without medicine. We look upon the human system as a machine which, if properly adjusted, will keep in perfect working order. In that way we eradicate disease from the system.

"If the brain has power to instruct the blood to build up a bone, a tooth, a finger nail, is it not reasonable to suppose that it has power to build up any part of the body that is affected with some malady?

"The brain may be termed the drug store of the body, and all the chemicals introduced into the system which are not natural to it, such as arsenic, opium and so on, only serve to clog and stupefy the workings of the body. If the osteopath understands what to do, and how to do it, he can adjust any part of the body so as to cause a broken bone to knit, or any part of the body which is affected by disease to build itself up. Therefore drugs are not necessary. We assist nature to cure without them."

This is about on a par with their pathology, which teaches (according to some of their Denver representatives) that people do not have consumption, but they suffer simply from a dislocated rib pressing on the lungs. Of course they always locate the dislocated rib, reduce the luxation, and their tubercular patients never die. It is

also about on a par with a statement of one of their local bright lights, perhaps the above quoted D. O. may recognize it while taking a course in anatomy in one of the local regular medical colleges (!). The said "bright light," in response to a question by the instructor as to the course the ribs, replied, "Oh, well, they run 'slauch-wise.'" It is not known whether or not his brain instructed his blood to direct his muscles not to move his skeleton to the college any more, but his attendance ceased thereafter.—*The Colorado Medical Journal*.

To Keep the Hands Soft and White.

In these days of asepsis the hands of the physician, and especially of the surgeon, suffer greatly from frequent scrubbing and immersions in antiseptic solutions. A preparation that will keep the hands soft and white and that will not at the same time be inelegant to use is always in demand. The following formula will be found to be one of the very best ever proposed for the purpose.

R	Ol rosæ	gtt xv
	Glycerin	3i
	Spts. myrciæ	3iii
	Ol. cajuput	gtt. xx

M. Apply at night before retiring, first washing the hands thoroughly in hot water. In cold weather this can also be applied to the hands before going out.—*California Medical Journal*.

Vagaries of a Somnambulist.

George Ritterbrand, a young somnambulist, whose habit or sleepwalking is said to have been due to deep grief over the death of his father, recently disappeared, and four days after walked into a police station-house declaring that he had lost all recollection of his identity. During this period he had kept an account of his wanderings, which were confined to Manhattan and Brooklyn, in a note-book. The writing was entirely different from his ordinary penmanship, and, though he was a graduate of the college of the City of New York, the spelling and construction were those of an illiterate person.—*Boston Medical and Surgical Journal*.

If you can help it, don't operate on a man who is drunk, especially if he appears to be an habitual drunkard. Drunkenness certainly seems to favor the occurrence of sepsis, owing to diminished resistance of the tissues, and shock occurs very readily. Besides this, delirium tremens may come on to complicate matters.

STANDARD PREPARATIONS

Made for and Highly Endorsed by Medical Men Everywhere.

Unguentum Resinol. *Antipruritic, Antiphlogistic, Nutrient and Plerotic*

Elixir Cascanata. *Alterative, Laxative, Antacid and Secernent.*

Resinol Soap. *Prophylactic, Germicidal, Etc.*

"Resinol is the best remedy I have ever used in Pruritus Ani.

GEO. H. SMITH, M. D., Brooklyn, N. Y."

I have requested our druggists to carry UNGUENTUM RESINOL and RESINOL SOAP. They are all right.—

A. E. EARLY, M. D., Kingman, Arizona.

RESINOL has given me entire satisfaction. Its wide range of usefulness especially recommends it.—

LOUIS A. BOORING, M. D., Louisville, Ky.

Am prescribing UNGUENTUM RESINOL with great satisfaction.—J. S. BEAUDRY, M. D., Chicago, Ill.

Have used RESINOL in many cases and am exceedingly pleased with its action.—G. E. WILDER, M. D., Sandusky, Ohio.

I cannot find anything that can take the place of RESINOL.—A. AGEE, M. D., Holbrook, Ky.

I have found RESINOL to be a remarkable cure for almost any type of Sore.—G. D. BOUDOUSQUET, M.D., Tuscaloosa, Ala.

I have prescribed RESINOL in many cases and am very much pleased with it.—SAM'L G. SEWALL, M. D., E. 121st St., New York.

I have prescribed UNGUENTUM RESINOL with great success in Eczema, Pruritis Ani and Pruritis Vulvæ.—WM. LAMBERT, M. D., Kansas City, Mo.

I am more than pleased with UNGUENTUM RESINOL.—C. B. WALRAD, M. D., Johnstown N. Y.

All Leading Druggists carry these Goods.

RESINOL CHEMICAL COMPANY,

Samples sent on request.

BALTIMORE, MD.

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PHARMACEUTICAL PRODUCTS

TANNOPINE
Gastro-Intestinal
Astringent
and Disinfectant

An agreeable,
safe and efficient
remedy in acute
and chronic
intestinal
catarrhs and
tuberculosis.

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Mercuriol in the Treatment of Gonorrhea.

At a meeting of the Genito-Urinary Section of the New York Academy of Medicine, held on the 21st of March, Dr. Ferd. C. Valentine reported a case of acute gonorrhea treated by Mercuriol irrigations. The patient was an American, aged 32, married, the secretary of a corporation; and was unusually anxious to get well with as little loss of time as possible. He had had several previous gonorrheas, resulting in stricture. On January 21 last while inebriated he had coitus extra domum. Three days afterwards he found a free yellowish discharge, with the usual pain on urination. He at once put himself under treatment, and for ten days was irrigated regularly with mercuriol, for a part of the time twice a day. Discharge was reduced from a free yellow flow to a slight pinhead drop by the first irrigation of mercuriol, 5 per cent. and the urine became clear. Microscopic examination of a specimen of the discharge, which was taken on the first day, showed numerous gonococci characteristically grouped in pus cells. Two days later, after the fifth irrigation, the gonococci were found to have disappeared. A burning sensation was experienced after the irrigations, but the strength of the solutions being reduced, the pain gradually became less, and ultimately ceased. While he did not present the case as absolute

proof of the applicability of mercuriol as a gonococcicide, he thought the results obtained were sufficiently satisfactory to warrant further tests. The preparation, he added, was a new one prepared by Dr. Karl Schwickerath of Detroit.

Dr. Ramon Guiteras said mercuriol was being used at the New York Post-Graduate Hospital. The treatment was less drastic than that described by the reader of the paper, the custom at the institution referred to being to commence with small dosages and gradually increase their strength, especially when new preparations were being experimented with. In the case of mercuriol they had commenced with as mild a solution as one-half per cent. and finding favorable though rather slow results, they had gradually increased it, until now a solution of 2 per cent. was given to all patients who presented themselves at a clinic devoted exclusively to this mode of treatment, of which Dr. Otis K. Newell has special charge. He (Dr. Guiteras) was not sanguine about the discovery of a germicide which would cure gonorrhea in the brief time their unprofessional brethren with their remedies claimed to be able to do, but on the other hand he did not wish to be regarded as a pessimist, and if mercuriol proved to be as much of an improvement on protargol and argonin as they had done on permanganate and nitrate of silver, it proved at all events that they were progressing along the correct lines.

Further reports of experiments in progress with mercuriol are to be given at future meetings.

Organization of Genito-Urinary Specialists.

A new medical society has been formed under the name of the New York Genito-Urinary Society. The office-bearers are:—President, Dr. Ramon Guiteras, professor of genito-urinary diseases at the New York Post-Graduate Hospital; first vice-president, Dr. Winfield Ayers; second vice-president, Dr. Otis K. Newell; treasurer Dr. George W. Blanchard; secretary, Dr. A. D. Mabie; corresponding secretary and stenographer Samuel Bennett, 161 Garfield Place Brooklyn. It is intended to confine the membership to medical men engaged in active clinical work in connection with one branch or another of the specialty. Meetings will be held once a month, when cases will be reported, and at least one paper read. Correspondence is invited with specialists in other parts of the country and abroad. The corresponding secretary will furnish information as to terms of membership, etc.

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Causes, Diagnosis and Treatment of Cystitis.

In the Medical News of April 17th, 1900 appears a complete and comprehensive article with above title by Dr. Ramon Guiteras, a recognized authority on diseases of the genito-urinary tract. We reprint herewith portion of this paper on "Treatment of Cystitis Due to Tuberculosis."

"In the treatment of tubercular cystitis, the practitioner encounters a condition that taxes all the resources at his command and he errs, as a rule, on the side of too much, rather than too little treatment. In other words, it often happens that the more you treat the patient locally for his cystitis, the worse the condition becomes. It is, therefore, necessary to proceed cautiously in the treatment of this form of bladder inflammation, and, above all, is it important to improve the general condition of the patient as much as possible. If we were to treat patients suffering from tubercular cystitis along the same lines as pulmonary cases, namely, by sending them away to lead an open-air life under conditions that would improve their nutrition to the utmost, the condition would be much more rapidly improved or cured than by anything that could be done by the ablest specialist of the period.

Numerous remedies have been recommended by different authorities for the treatment of this form of cystitis, and naturally every practitioner who encounters this rebellious trouble grasps at anything that offers the probability of a cure. Guyon at one time advocated the use of intravesical injections of bichloride of mercury, 1 to 10,000 and since then many have been following his advice, but such a solution will rarely cure this disease, while it usually produces an irritation that is almost unbearable.

Nitrate of silver and permanganate of potassium have the same effect. Boric acid and boro-glycerine irritate less, but do not seem to possess the power to ameliorate the disease. Recently iodoform injections have been advocated, and the procedure would seem to be founded on a logical basis. Three or four ounces of a five-per-cent solution of iodoform in liquid vaseline are injected into the bladder every two or three days, the patient being instructed to watch the stream when he urinates and stop the flow just as soon as the oil appears. This forms a permanent iodoform dressing of the bladder-wall, and in the hands of some of the French surgeons is said to have met with gratifying results.

Personally, I have had better results with boro-lyptol in this class of cases than with

any other remedy which I have employed. This seems to have a powerful germicidal effect, while the fact that it does not irritate the bladder renders it pleasant to the patient. It is used in the strength of from 1 in 8 in to 1 in 16 in irrigations by the hydrostatic method. After a few irrigations at the office, the patient will be able to use it every night at home. I have one patient now under observation who suffered for a number of years from a most aggravating frequency of urination accompanied by pain dependent upon a tubercular cystitis. Under this treatment the urine has cleared up, the tubercle bacilli have disappeared and the patient can hold his urine from seven to nine hours at night and from four to six hours during the day.

Internally in connection with any local treatment, an antispasmodic and internal antiseptic should be used as a palliative measure; it is wonderful how relief may be given to the patient by this means, even although pus remains in the urine and the tubercle bacilli still be found. One patient has been coming to me for three months who was entirely relieved of his disagreeable subjective symptoms by a mixture containing 10 minims of the tincture of belladonna, 15 grains of benzoate of soda, and oil of gaultheria up to one drachm, t. i. d., although not until he was put on the boro-lyptol irrigation did the pus and tubercle bacilli in the urine diminish to any marked degree. The effect of the palliative internal medication is worthy of notice, in view of the fact that he had suffered for fourteen years and had been under the care of many different physicians without relief, having most probably been overtreated by too much instrumentation and too frequent or too irritating irrigations."

Didn't Keep It.

"Well, Mr. Slickers," said the doctor to a patient he had not seen the day before, "how are you getting along?"

"Nearly starving to death."

"Why, didn't you have the oysters?"

"No; I could not get them the way you said, and I was afraid it would be dangerous to eat them any other way."

"Why, that's odd. Couldn't you get stewed oysters easily? I told you you could eat stewed oysters with impunity."

"That's just it. I could get the stewed oysters easy enough, but I sent to all the restaurants in the neighborhood for the impunity, and the blamed fools say they never had such a thing on the bill of fair."—*New York World*.



6

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For that tired bilious feeling, one-eighth of a grain of calomel every half hour until one grain has been taken; followed next morning by a cathartic, say a bottle of citrate of magnesia, is excellent. Do this once a week for about three times. By the way, the French set aside one day in the week for medical purposes, and regulate their social affairs with this in view. A gentle purging now and then is a good thing for the best of men.—*Medical Sentinel.*

The preparations of "Pepsin," made by Robinson-Pettet Co., are endorsed by many prominent physicians. We recommend a careful perusal of the advertisement of this well known manufacturing house. (See add on another page.)

In phlegmonous inflammation of the last phalanx it is well to cut down to the bone, but if the middle or first phalanx is affected it is better surgery to avoid going through the sheath of the tendon.

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St. Paul, Minn.

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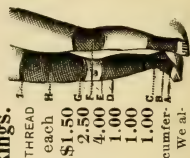
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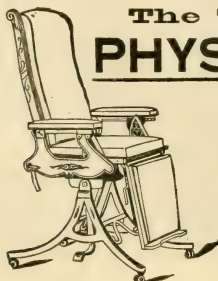
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A Bill Regarding the Rank of the Surgeon General.

A bill has recently been introduced in the House by a member of Congress from Georgia, giving the Surgeon-General of the Army the rank and pay of major-general. This is in line with the action taken some months ago by the Savannah Medical Society, urging the establishment of this grade as being warranted by the great responsibilities which now and in the future will continue to devolve upon the chief of the Army Medical Department. —*Boston Medical and Surgical Journal.*

Trephining must be reserved for the following fractures of the skull:

1. Subcutaneous fractures in adults with marked depression.
2. Subcutaneous fractures in adults attended by focal symptoms.
3. All compound fractures, including punctured and gunshot fractures.
4. Fracture, compound and subcutaneous, complicated by hemorrhage from the middle meningeal artery.—*Senn.*

A Mental Healer not Wanted in Belgium.

It is reported in London that a "professor of mental healing," an American citizen, has complained to the government of this country that he was expelled from Brussels by the Belgian minister of justice. It is to be hoped the Belgian authorities will be induced to retract their edict of expulsion, otherwise the "healer" might return to this country.—*Medical Record.*

According to surgeon general Sternberg's report the death-rate from disease in our army per 1,000 of strength has been: Troops in the United States, 17.45; troops in the Philippines, 18.60; troops in Puerto Rico, 39.38; troops in Cuba, 61.15. In this connection special note may be made of the fact that the death-rate from disease in our volunteer army during the past year of the civil war, May, 1861, to April, 1862, inclusive, was 45.86 per 1,000 of strength, and that when the deaths of the first eighteen months of that war are applied as a comparison we find 78.41 per 1,000 for the period, which is equivalent to an annual rate of 52.27.—*West. Medical Review.*

The Charlotte Medical Journal.

VOL. XVI.

CHARLOTTE, N. C., JUNE, 1900.

No. 6.

President's Message.

By Geo. W. Long, M. D., Graham, N. C.

Fellow Members of the Medical Society of the State of North Carolina.

In looking back over our past history there are many points upon which it is pleasant to dwell and among these there are none, and we are glad to have this public opportunity to acknowledge it, which gives us more pleasure and which kindles more kindly associations than our last meeting in this town just seventeen years ago.

Some who cheered us by their presence and counsel then, have gone to where, we trust, "Beyond these voices there is peace." Others of us have been looking forward, with almost feverish anxiety, to the renewal of those old friendships which cluster around this hospitable community. This is the home of the lamented Pittman whose generosity and love for this society have been perpetuated by a noble and gracious daughter. Every additional year has added largely to our numbers and influence and of course our responsibilities have been correspondingly increased. The normal growth and development of our society has not been due to the adoption of any questionable methods. Those who have contributed the most to the permanency of this organization have always made its constitution the guiding star of their logic: "The objects of this society shall be the advancement of medical knowledge, the elevation of professional character and the promotion of all measures of a professional nature that are adapted to the relief of suffering humanity, and to improve the health and protect the lives of the community"—Vide article II of our constitution.

It has been my esteemed privilege as well as pleasure to attend almost every meeting of this society for nearly a quarter of a century. In a large majority of instances I was one of the first on hand and one of the last to leave. I can truly say that I have never regretted it. I believe this society has done more for the elevation of the profession in our state than all other agencies combined. I advise all

the young doctors to join it as soon as possible and take an active interest in its work. Without attempting to enter into details of work already done or indulging in heartless compliment of those who have done their duty I want to suggest that although doctors are disposed to disagree about a great many things there are some things upon which they do agree. One of these is that the study of anatomy lies at the very foundation of a medical education. In fact I do not see how any one can practice intelligently without using his anatomy all the time. If this is so it strikes me that it is the duty of this society to adopt a resolution instructing our Committee on Legislation to make an effort to get our legislature to enact a suitable dissecting law by which ample material may be obtained upon reasonable terms. At present it is a difficult matter, so I am credibly informed, for our medical schools to procure sufficient dissecting material to supply their classes. When one comes to think carefully about it our schools are really among the most active agencies in all the fundamental progressive work of our profession. I do not see how we can go wrong in encouraging them in every legitimate way in our power. Every move we make here or elsewhere for their improvement is a step in the right direction. We have it in our power by proper organization and management to influence our legislators to give us not only a suitable dissecting law but also an act which will enable the state to provide for the neglected insane. Who can read without feelings of sorrow and sadness the appeals of the friends of these unfortunate people to the superintendents of our hospitals? Our attention has been directed to the subject time and again in various ways and it is high time for the medical profession to take some decided stand and emphasize the great and urgent necessity of giving these helpless people the benefit to be derived from special treatment. I do not believe that the facts are generally known by the people. It is the duty of the profession to try to inform them. As soon as the true condition is understood I think there can be no doubt but that ample provision will be made. If it is not we will have the consolation of knowing that we have per-

formed our duty. We can do nothing more. We ought not to be satisfied with doing less. It would add greatly to our usefulness if every regular doctor in the State would consider himself a member of our State Board of Health. We would then have the profession in shape to work on sanitary lines which is really its true mission. A little more zeal and earnestness in the work of educating our people, would doubtless induce them to respond, through their representatives, in a satisfactory way. Some of our members act as if they thought this society could run itself. This is a very great mistake. Good physicians cannot attend these meetings at all except at a great sacrifice and the work cannot be properly performed without great labor. So let us resolve to do our duty in the love of it. If our State is to enjoy the benefit of wholesome sanitary legislation it will, in my opinion, have to be brought about chiefly through our profession. Very much that is written nowadays will scarcely be read by the thinking people of the generation which is to follow us. If we make higher moral and professional education the passport and sanitary medicine the watchword we need have no fears but that our work will stand the test of time, the great adjudicator which burnishes the gold and buries the dross. The excellent work performed by our Examining Board has resulted in enlarged faculties for instruction in all the medical colleges of our country. The number of years have been increased and the terms made longer so that some of the commencements do not come off in time for the applicants to be on hand at the time that our Board of Examiners meets. The change of meeting from the 15th, as first announced, to the 22nd was but an attempt of those having the matter in charge to meet this exigency. I hope this question may be wisely determined. I understand from Dr. W. W. Keen, President of the American Medical Association, that the Gallinger Antivivisection Bill is still pending and that the senator is trying to push it all he can. I suggest that we repeat our resolutions of protest and send copies to our senators, also to the Senate and House. If we could secure the active opposition of Senator Pritchard, who is a member of the committee, even to the extent of getting it out of the committee, we would gain a great point. So far as I know our profession is to be congratulated on the fact that it is practically free, here in North Carolina, from imbibing that fallacious doctrines of the Osteopaths and Christian Scientists. If any would like to see a satisfactory refutation of the doctrine

of Christian Science I would refer them to Rev. W. P. McCorkle, Graham, N. C., who has written the best book I have ever seen anywhere on the subject.

As is usual on such occasions our Obituary Committee will have the painful task of preparing appropriate resolutions of respect to the memory of some of our truest and best members who have been called to a higher service. Among these are Drs. Littlejohn, Gray, Turlington, Hornaday, McDuffie, Tucker and Wood.

Having briefly endeavored to remind you of a few of those things which I conceive to be of some practical importance to our society and State I hasten to conclude. Recognizing a superintending Providence in all things I trust that all our deliberations may be characterized by wisdom and prudence so that when our work is finished it may bring honor to ourselves, gratification to our friends and usefulness to our country. To have your confidence and esteem is a great distinction I do appreciate it. Finally permit me to thank you all again with assurances that wherever in the Providence of God your lot may be cast you will have my earnest prayers and zealous wishes for your welfare present and eternal.

The Annual Essay. The Relation of Bacteria to Disease.*

By R. H. Whitehead, M. D.,
Chapel Hill, N. C.

Mr. President, Ladies and Gentlemen:

It has been objected to physicians as a class that they hold themselves too much apart from their fellow-citizens, that they make too little effort to cultivate in the general public a sympathy for the scientific aspirations of their profession, and that they thus become associated in the minds of the laity only with actual sickness—as was certainly the case with the little baby, who, when suddenly shown the photograph of the family physician, immediately put out her tongue. However that may be, it is doubtless a wise custom of this Society which decrees that at least one of its sessions shall be thrown open to the public, and that the subjects discussed on this occasion shall be of a nature likely to appeal to laymen as well as to physicians.

In trying to accomplish my part of this task, I have chosen the subject of the Relation of Bacteria to Disease. To an audience composed only of physicians I should

*Read before the North Carolina Medical Society at Tarboro, N. C., May, 1900.

feel it necessary to apologize for the choice. The discovery of the connection of bacteria with many pathological processes has, quite naturally, produced a great deal of discussion in the public press, and much of it is full of erroneous statements. That class of newspapers which has for some reason been dubbed "yellow," frequently publishes the most extraordinary articles concerning bacteriology, and over-zealous bacteriologists have often heralded forth premature statements of a somewhat alarming nature. It is not strange that the conception of bacteria entertained by the public mind is more or less hazy, that one community is "germ-shy," another not shy enough. Moreover, preventive medicine is bacteriological in its very essence, and we can not expect to accomplish a great deal in this direction unless our efforts are approved and sustained by intelligent public opinion. For these reasons I have thought that I might best fulfill my function as essayist on this occasion by attempting to present some of the elementary but fundamental facts of bacteriology.

The bacteria—for which germs, microbes, and micro-organisms are synonymous terms—are exceedingly minute vegetable organisms which reproduce their kind by the simple process of fission—splitting in two. While there is an almost endless variety of them, the simple classification based upon their shape is quite sufficient for our purposes. According to this classification a spherical bacterium is called a coccus, a rod-shaped one a bacillus, and a more or less curved one a spirillum. In this connection it is well to observe that some of the bacteria are capable of motion in a fluid environment, and that this motility is due to certain appendages called flagella, by means of which they are able to dart about oftentimes with astonishing rapidity. A still more striking quality that some bacteria possess is the ability to pass into a so-called resting stage when subjected to certain unfavorable influences. In this condition the organism has changed its shape and apparently also its constitution, is far less influenced by external circumstances than the mature bacterium, and is known as a spore. This spore has the remarkable power of returning to its original condition as a full-fledged bacterium when the environment again becomes favorable to its nutrition.

As regards the natural history of bacteria we are in possession of a very extensive information. We know that, although classed with plants, bacteria feed by preference like animals. Plants, you know, by means of their leaves and roots derive their nourishment from simple stable chemical com-

pounds like water, carbon dioxide, and ammonia; but the bacteria, like animals, demands the unstable organic compounds. In utilizing these substances as food they bring about in them the most profound changes, which fact, as we shall see presently, is of the utmost importance to us. Another fact to be emphasized is that some bacteria derive their nutrition only from dead organic matter, are incapable of multiplication in living tissues, and will quickly perish even should they by any means be introduced into such tissues. To this large class of bacteria the general name of saprophytes is given. On the other hand, those bacteria which thrive on living matter constitute the parasites; these are the disease producing—the pathogenic—organisms. Fortunately for the bacteriologist the parasites are also capable of growing in dead matter. This makes it possible to cultivate them in various laboratory media, to study the characters and peculiarities of their growth, to subject them to various conditions favorable and unfavorable to them, and to study their action upon animal tissue at will, and so to identify and classify them.

At the outset, then, we are met by two great classes of bacteria: the parasites, which can multiply in living as well as dead matter, and which are our enemies; and the saprophytes which live only in dead matter, and are, for the most part, our benefactors. Through the agency of the saprophytic bacteria the various forms of putrefaction are brought about, by them most of the fermentations are effected, and to them we are indebted for many other useful processes—even the flavor of good butter, you know, is due to bacteria. Moreover, they are the scavengers of the earth. All waste and dead organic matter, whether in the air, the water or the soil, whether derived from animals or plants, is their food, and in feeding upon it they decompose it into those simple compounds, in which shape alone plants are able to assimilate their food. Thus they are the purveyors to the vegetable world; and since the animal world is dependent upon the plants for existence, it follows, of course, that the bacteria are essential to our existence. Thus they play the leading role in the conservation of matter, that extraordinary economy of nature, which does not suffer a single atom to be lost; they are the active agents in that wonderful cycle from life to death, from death to life again, the constant interchange between the vegetable and animal kingdoms, so that our modern scientific realism has almost confirmed the mystic philosophy of the old "Sultan of the Persian song" who said:

"I sometimes think that never blooms so red
The rose as where some buried Cæsar bled;
That every hyacinth the garden colors
Dropt to her lap from some once lovely
head."

In addition to organic pabulum, the bacteria require water. Some moisture is absolutely essential to their welfare, and simple drying is fatal to many of the pathogenic bacteria.

With respect to oxygen, they vary greatly in their behavior; some will not grow in its absence, others will not thrive in its presence, and many do equally well either with or without that element.

Temperature exerts a very marked influence upon bacteria. All the pathogenic bacteria grow best at blood heat, but while some, indeed, will not grow upon artificial media at even a few degrees below this degree, most of them develop fairly well at ordinary temperatures. Extreme heat has a far more injurious effect upon them than extreme cold. We may say in general terms that all bacteria and their spores are killed by an exposure of a few minutes to a temperature of 180 deg. F. On the other hand, while bacteria do not seem to multiply in ice, they are in many instances capable of existence in it, and are able to resume development when brought into more favorable surroundings.

Again, most bacteria do best when the chemical reaction of their environment is neutral or faintly alkaline; the presence of even a very slight amount of certain acids is quite sufficient to inhibit the growth of many pathogenic germs.

Direct sunlight is one of the most unfavorable influences to which bacteria are exposed in a state of nature—they love darkness rather than light. A great many chemicals, such as corrosive sublimate, carbolic acid, &c., are very fatal to them, and are freely used in surgical and hygienic practice as germicides; but we should bear in mind that heat is, wherever it can be applied, the most reliable of all germicides.

It follows, then, from what has been said, that wherever there are waste organic matter, moisture, and ordinary degrees of temperature, there bacteria are developing; in short, they exist almost everywhere. But it may be well to say something as to their presence in certain media, namely, air, water, soil, and food.

In the air bacteria are quite numerous, though the quantity and quality of them vary much with circumstances which we need not discuss. They are carried about in the shape of dust by currents of air, and are deposited here and there by gravity. There are several facts in this connection to

be borne in mind. The saprophytes usually are much more numerous than the pathogenic germs. It appears that ordinary currents of air are unable to dislodge bacteria from moist surfaces; so that the organisms, in order to be borne in the air, must be in a more or less dried state. For example, we are in no danger of inhaling the bacilli of tuberculosis from the sputum of a consumptive person, even though it may be loaded with those germs, so long as it is wet; it has to be dried and in the form of dust to become a source of danger through inhalation. Again, since complete dessication is fatal to most bacteria—the bacillus of tuberculosis is a marked exception—it follows that they probably do not live in dry air for any great length of time. Furthermore, since air currents do not dislodge bacteria from moist surfaces, bacterial diseases are probably not conveyed directly from one person to another "on the breath."

In all ordinary water, bacteria are fairly numerous, but here, too, saprophytes are the prevailing organisms. Indeed, water seems to be the normal habitat of many harmless bacteria, known, therefore, as "the water bacteria." In a general way we may state that the presence of pathogenic organisms in water is due to contamination from the outside. But pathogenic bacteria, as a rule, do not thrive in water; for, since the amount of organic matter in water is usually small, a struggle for existence must take place between them and the water bacteria, in which the latter are at home, acclimated so to speak—and, as the fittest, survive. Then, too, running water by the processes of sedimentation and filtration tends towards a self-purification in a comparatively short time. And yet, in spite of the disadvantages under which pathogenic germs labor when in water, the fact remains that drinking water is by far the most common vehicle of infection in such diseases as typhoid fever and cholera.

The superficial layers of the soil, of course, are teeming with bacteria, and it is from this source that water is usually infected. A fact to be noted is that soil is the home of some of the most virulent germs, especially that of lock-jaw—the bacillus of tetanus. This microbe seems to prefer garden soil and that about stables; so that we always regard with suspicion a wound contaminated by this sort of soil.

With respect to the bacteria in food, I can not help thinking that the danger to us from this source has been exaggerated. In the first place, we have a natural aversion to spoiled food; then, too, the muscular system of animals is not often attacked by germs; and, finally, we usually employ such

degrees of heat in the preparation of our food as to completely destroy bacteria. There is no doubt, however, that disease may be conveyed by food, either as the result of insufficient cooking of diseased food, or from contamination after cooking, if the food be of a kind that we usually cook. A fly's foot is very diminutive, but it is big enough to carry many germs. Raw food, such as milk and its derivatives, are much more likely to convey disease. Milk is an ideal culture medium, absorbs readily, and so is liable to contamination from external sources; moreover, if the udder of the cow be affected by a bacterial disease, the milk will doubtless contain the germs of that disease.

We have next to consider the means by which bacteria gain access to the body. First among these avenues is the skin. Since this organ is covered by several layers of horny scales, we may doubt if bacteria are able to enter through an unbroken skin; but it is exceedingly common for organisms to gain access to the tissues through solutions in the continuity of the skin, though such solutions may be the merest abrasions, so slight as to escape observation entirely. Many bacteria live in the secretions of the skin glands, and while the large proportion of these may be saprophytes; still pathogenic organisms are almost normally found there. It is easy to understand how a very slight wound, even though made with an instrument perfectly free from bacteria, might introduce pathogenic germs. It is in the skin that we are especially apt to find the organisms usually associated with the formation of pus—the bane of the surgeon. This discovery and the application of means to prevent the entrance of bacteria into wounds, have, you know, brought about a progress in surgery unprecedented in the history of the art.

Another common avenue for the entrance of germs is the respiratory tract. The upper air passages normally contain numerous bacteria, some of which are parasites; and it is in this region that the dust of inhaled air is arrested. As in the case of the skin, so with mucous membranes, it is permissible to doubt if bacteria pass through them, provided their lining cells are in a healthy condition. Moreover, in healthy animals, investigators have been unable to find bacteria of any sort in the deeper portions of the air passages. Nevertheless, under circumstances not well understood at present, infection through the respiratory tract, even its deeper parts, is quite common. Some of the most serious diseases, such as pneumonia and consumption, being usually contracted through that path.

Another avenue of entrance is the alimentary tract. Certain portions of it swarm with bacteria, some of which are pathogenic and under certain conditions may seize a chance to enter the tissues. Then, too, contaminated water and food may introduce other more dangerous organisms. But in this case we derive considerable protection from the fact that the stomach usually contains an acid secretion, and acids, we have seen, arrest the growth of many bacteria. Thus Koch was not able to produce cholera by feeding the germs to dogs until he first neutralized the acidity of the gastric juice.

So that in each case we are provided with barriers, which the bacteria must overcome before they can invade the tissues.

But suppose that a germ has been introduced into living tissue, it by no means follows necessarily that it will be able to exist there—it may or may not. "A sower went forth to sow his seed. * * And some fell upon a rock; and as soon as it was sprung up, it withered away, because it lacked moisture. And some fell among thorns, and the thorns sprang up with it and choked it. And others fell on good ground, and sprung up, and bore fruit an hundred fold." Now, bacteria are just so many vegetable seed. They will not live and multiply except in "good ground." It is a time-worn observation that different persons contract infectious diseases with different degree of facility. Introduced into the tissues of one man, bacteria may die without even an attempt at sprouting, so to speak; in another they may succeed in growing, but the attack is "mild;" while in a third they find a suitable soil, and work out their functions. So that in the equation of disease the bacteria, y , are only one factor; and an equally important one is the soil, the unknown quantity x . For we are much in the dark as to the nature of susceptibility to disease. Of course, we may say in general terms that various circumstances, such as poor food, lack of sun-light, bad ventilation, damp dwellings, exposure to cold, various forms of intemperance and excess, and certain hereditary states render us more liable to the attacks of germs; but in its essence the problem is unsolved. If we should ever learn why some tissues are not "good ground" for bacteria in the same way that we know why one soil is unfit for tobacco, and another is unfit for corn, you can easily see that a prodigious step would be taken. Many investigators in many lands are studying the question, approaching it from different points of view, and we may at least hope for success. At present we have only hints, suggestions as to lines of research

to be followed, and can only say that living tissues as such possess a certain amount of natural resistance to the bacteria. If this resistance is successful, we call it immunity.

The question now arises, how do bacteria act? What weapons do they use in the fight?

Without entering into an account of how the knowledge has been obtained, I may simply state that the action of pathogenic bacteria is due to chemical substances elaborated by them. To these bodies the general term of toxins is applied. For the most part, their exact chemical constitution has not yet been established, though they are believed to be allied to the albumins. Many of them are exceedingly powerful, far surpassing any poisons previously known to us. The weapons, then, which bacteria use are chemical poisons; it is not unreasonable, therefore, it may be remarked in passing, to hope that some day antidotes will be discovered for them, just as we are now in possession of antidotes for many other poisons. These toxins are the agents which produce most of the symptoms of bacterial diseases; for example, we may kill a guinea pig by injecting a liquid in which the bacilli of diphtheria have been growing, but from which they have all been removed, just as readily as by injecting the bacilli themselves. Some of the toxins produce very profound changes in the tissues attacked by them; thus, the toxins of the common pus organisms first kill the tissue in their immediate neighborhood, and then dissolve it. Others, like the bacilli of tuberculosis, bring about a proliferation of the cells which they attack and this new tissue afterwards dies.

According to the relation of the bacteria to the blood circulation, we may divide bacterial diseases into two classes. In the first class the germs are localized to one or more situations in the tissues; but while they are not in the blood, the toxins manufactured by them are absorbed by the blood, and carried by it to all portions of the body. Diphtheria and lock-jaw are good examples of this infection. In the second class the bacteria are living and multiplying in the blood, constantly setting free toxins in greater or less amount, and are removed, to a great extent, from our remedial measures. Of these two cases, it is obvious that the second is much the more dangerous, and far more difficult to treat. However, the division is not a hard-and-fast one; bacteria may be at first localized in the tissues, and later on gain entrance to the blood. Occasionally the common saprophytes, especially the organisms of putrefaction, give rise to poisoning in a somewhat indirect manner. These bacteria, in some cases,

manufacture certain poisons called ptomaines out of the material in which they are living; should these ptomaines be introduced into the stomach in spoiled food, milk, ice cream, &c., they will give rise to symptoms of poisoning, in the same way as an over-dose of some of the drugs in the materia medica.

These, then, are some of the fundamental facts of bacteriology. Lack of time has not permitted me to mention many other interesting ones, or to even refer to many useful applications of them.

In conclusion, I beg to remind you that bacteriology is a young, a very young science, but its accomplishments are out of all proportion to its age. Mistakes have been made, of course, and will be made—which only amounts to saying that men are human. But it is founded upon the most patient and skillful labor; it has been built up by men possessed of enthusiasm for truth, capable of the most intense application, endowed with clear sight, and wielding intelligence of the very highest order. The very names of such men as Pasteur, Lister, Welch, Sternberg, and a host of others, are a guarantee of honest, faithful, and able work. Certainly the day has gone by when we could afford to make a jest of it and disregard its teachings. Whoever stands in the way of the thing we call progress is soon swept aside. It has yet a vast deal of work to do; as in the case of all progressive sciences, the solution of one problem brings into view others which await solution in their turn. In the meantime, we may not expect it to work miracles, but we should endeavor to maintain towards it an open mind, unbiased by scepticism, and unmoved by the theories of alarmists.

"Watchman, Tell Us of the Night."*

By Dr. T. S. McMullan, of Hertford, N. C.

Mr. President, Members of the North Carolina Medical Society, Ladies and Gentlemen.

The future, that great space which divides us from eternity, which shall echo to the tramp of millions, born and unborn, that shall witness the triumph of many of our beginnings and the beginnings of our forebears, is a sealed book. Since the days of Malachi, the last of the inspired prophets (barring the announcement of the birth of Christ by St. John the Baptist) no man, with power human or divine, has been able to probe its mysteries, to fathom

*Annual Oration Before the North Carolina Medical Society, at Tarboro, N. C., May, 1900.

its depths, to look out over interminable expanse, and to tell us now living what are its hidden thoughts and its hidden actions; what struggles between man and man he sees; what conflicts between races he sees; what mighty projects, what mighty powers, what awful upheavels of nature and what bloody revolutions of men are hidden in its mysterious folds as with a cloak. The old seers of long ago claimed, and the people believed them, to foretell events. In the glittering twilight of a summer's eve, when the helmets of the foemen's hosts encamped about old Priam's city cast their scintillating glances upon his native walls, where sat around the doorstep of the palace his aged father, and where his warlike mien and martial thoughts were softened by his child in the arms of its mother, the seer told Hector that before to-morrow's sun the Greeks should conquer Troy. Upon the rugged slope of Ben Lomond, with the glittering sheen of its Loch meeting his eye, as if in its placidity he saw the picture of his chieftain fallen, the Scottish bard sang to Lochiel his doom. The Ides of March were predicted to great Cæsar as his day of death, and the lateness of the conspirator's blow was but the intensifying to the people of his prophetic vision. And in modern times, men have been swayed to deeds of evil, and have been led to deeds of daring by the words of those they believed in; men have been murdered, women murdered, children murdered, character murdered, intellect murdered, because of the faith the people have had in prophecy; crimes have been committed in the name of prophecy; nations have fallen, and nations have arisen in the name of this high-priestess, and in some way during all the eternal years the names of the old masters have been invoked to bring forth testimony that the power of seeing the hidden had not been lost. It is said, Mr. President, that the eagles of France were carried to such glorious victories during the first Consulate and Empire, because Napoleon believed in the prophecy made his mother while yet he was in her womb; that he had faith in this foretelling of his "Star" of destiny; that it was this "Star" that led him in his terrific crossing of the bridge of Lodi; that it was this "Star" that led him when he changed defeat to triumph at Marengo; that it was this "Star" that led him when he charged the Russian hosts at Austerlitz, where set their sun of empire as did the orb of day; that it was this "Star" in which he believed, that was his beacon at Wagram, and Jena, and at Auerstadt, and that this faith in his "Star" never faltered; no, not even when it was eclipsed at Elba,

and at Waterloo sank among the gory bodies of his devoted guard to rise no more. And even now, in this enlightened time, we find those among us who believe in prophecy and soothsayings; not many, it is true, but some.

But, sir, there is a way by which we can presage events; by which we can judge of men's future walks; by which we can measure their thoughts, consider their ways and determine their ends. The philosophy of actions, the metaphysics of mind is the same since the world began; the laws of nature are the same now and forever, as they were yesterday, and so the laws of our human existence are like the laws which governed Adam, which governed Noah, which governed Saul, which governed Judas.

This law of analogy in life, by which we can deduct and draw conclusions, and which aids us in foretelling what may transpire in the future, is not akin to prophecy; it has no inspiration, no subtleties, but yet it is a law of divine conception, of divine injunction and is not allied in any degree to that quality, attributed by latter-day false prophets to themselves, which quality to them is useful only for unholy purposes and unholy gains.

The past of man gives us a working hypothesis for viewing his future. All scientists of to-day judge the future from the past; the astronomer, in his observatory, computes certain evolutions of certain planets at certain times from his knowledge of past evolutions; the mariner can guide his ship to harbor, because the experience of other mariners has perfected his charts; the general, with his ponderous army, can wield it as he would a mighty weapon, because each age, adding its rules to those existing, has made war a science. So in all the ways of life, laws fixed and immutable govern us, and as surely as we are carrying on the work begun, shall our work, unfinished and susceptible to many changes and of many betterments be carried to its end; and so may we of this time, in looking back through the vista of years that are gone, and casting our eyes futurewards, sing with Thomas Campbell—

"I watch the wheels of nature's mazy plan"

"And judge the future by the past of man."

An address of this kind, and on this occasion, is expected to be, Ladies and Gentlemen, I presume, semi-medical; it is expected that being addressed to an audience not entirely scientific, it be not couched in such mellifluous technicalities that the lay-

men be confused, nor should it be entirely void of special interest to the profession. Our medical societies are the couches from which spring the best and truest of medical knowledge, and in their sessions our first endeavors should be to instruct, to bring forth some ideas, and to put in action some forces that shall hasten us on our restless path. So to-night I shall try to draw some conclusions as to the future of medicine from its past; not as a prophet, or as a seer, but simply as an indigent observer of past and present events. It will be needful to carry you back in the past ages; to note the birth of our profession; its existence among hostile surroundings, its trials, its fortitudes, its mistakes, its discoveries, its influence on men and kings, and finally its evolution to that state wherein it was ranked as a science beloved and honored; its followers, past and present, sought because of faith, of themselves in their science, and of the people in them.

The history of medicine, Mr. President, has not yet been fully written, nor can it ever be; the deeds of its lowly heroes will not be known. Like in some vast mountain range some peaks o'er top the lower hills, and stand out to the eye pictures of eternal grandeur, so in the past of the history of medicine, there are certain epochs, that from century to century stand forth as sentinels of its progress, but which, like the mountain peaks that lean for support on the foot-hills about them, are made great because of the work of the lowly and obscure. Its history is a history of discoveries and many errors; of struggles against superstitions, against priestcraft, and against church hierarchies. Hand in hand has it marched with civilization; step by step has its foundation, true and scientific, been laid in the minds of the world, and almost alone has it o'ertopped false creeds of false prophets, and shown its former enemies its grandeur, its beauty, and its usefulness.

The beginning of the medical art is nearly co-eval with civilization; Egypt, in the time of Joseph, was possessed of men versed in the arts of embalming and healing, and the book of Leviticus, viewed even from a modern standpoint, is a wonderful exposition of the laws of right living, and no greater teacher of hygiene than Moses has yet appeared. And so during this period we have, though obscure and incomplete, a history of the art if not the science of medicine.

It is only needful for our purpose to-night to mention these different eras; that instructive period, when human beings, less than the brutes, but in somewise, knew

intuitively that when they were sick, certain changes in their laws of living, in their diet, and in their conduct were demanded. Then the time when signs and symbols were regarded, and immolations to the gods and goddesses were offered as appeasements in behalf of the physically distressed. The Pythagorean age, when doctors first visited the sick, and the epoch marked by the greatest advance yet known, the age of reason or philosophy, the chief worker in which age, was he who may be called the father of rational medical practice; and though the theories of Hippocrates were many of them wrong and his deductions faulty, yet he and his school are the pioneers of our teachings of to-day; they sought and advanced reasons for what they did, and imbued men and teachers with the sense that the animal economy of man must be known. This teaching and tendency led to the anatomical epoch of medical teaching; the chief promoters of which were Herophilus and Celsus, and after them the great physician Galen, to whom more than any other man of early history is the fund of medical literature indebted. It is a grand picture to us, Mr. President, that in these times, when the mind of the living earth was blighted by false beliefs, when men's souls were in darkness, when all they had to lead them aright was the voice of right implanted in them from the foundation of the world by that God they knew not of; when superstitions and auguries and signs were the mainsprings of their actions; when the frown of Apollo and the fury of Diana were more to be feared than all the pestilences and famines; when doctrines were unsettled and reasons wanting, it is I say, a beautiful reflection to us of this latter day time, that these men, reeking with a desire to upbuild mankind and to comfort the sick; burning with an enthusiasm that would shame some of later years, toiling with little gain, derided for their foolishness, and chided by kinsman and people, that these men toiled on and on, and in spite of hostility, in spite of derision, in spite of lack of opportunity for investigation, unyoked their science from the burdens upon it, and laid for us their followers, the true foundations upon which the principles of medicine rest to-day.

But following this came a transitory state; a state wherein most of what had been believed was discarded and forgotten; the first part of this period is from about 200 A. D. and embraces near fifty years. The world's power was incorporated in one man, and Rome upon her seven hills held dominion over all things earthly; internal

dissensions, those disarticulators of political economies, had ceased and no strifes endangered the peace of this mighty empire. And just as the minds of its citizen politicians were lulled into repose by the flight of enmities and wars, so scientific discussions and philosophic discourses were hushed, and medical science languished and retrograded. This time offers little of note; the chief matter of interest being that it presents the world Aetius, the first Christian doctor. And it is further of remembrance, Mr. President, that a woman, living in luxury and illustrious, a fair dame in the Eternal City, instances the first record of surrendered wealth, of surrendered homage, of surrendered pleasure, in that she gave up all to help the sick and indigent; and Paulina, this Roman matron, leaving her home, and together with other Christian women of Jerusalem, established there, under the vine-clad walls of the holy city, near it is said the very gate where the Great Physician healed the blind, an asylum for the sick, a refuge for the troubled. A glorious thought to the women of to-day should it be that they are the beginners in this work; that to them belongs the first glory of this mighty good, and that to them will be glory everlasting for their sweet womanly charity; always has it been, and always will it be, Mr. President, that the women, God bless them, shall be the vicegerents of angels on the earth.

The second part of this transitory period begins at the burning of the Alexandrian library and lasts near fourteen centuries. The star the West was declining, and the stages of investigation were being erected in the East; and even here we find those in authority and power the victims of fanaticism. The vast accumulation of scientific lore had been destroyed, and in all the known world the zeal of the proselyte was greater than the zeal of the philosopher. But this was soon changed, and a little later we find the Arabian physician respected and beloved; these set aside the dogmas and superstitions and fanaticisms of their former chiefs, and from the writings of Hippocrates and Galen and Aristotle, they sought to weave theories and construct practices for the betterment of physical man. The greatest of these, Phazes, should be remembered for his thoughtful advice to the laity in the matter of their choosing their medical advisers, and this precept, in itself, will make him forever great. While the Arabians were progressing in our branch of knowledge, in the West all was dark and gloomy; the era of science seems to have closed; barbarism reigned; hordes of pillagers swept over the land; its traditions

lost and its people enslaved. Charlemagne, it is true, himself a friend to the arts, restored some order during his reign, and sanctioned some original research, but at his death the world seemed again to be in darkness and in doubt, and—

“Man’s inhumanity to man,
(Made) countless thousands mourn.”

Only at the end of the 11th century, when feudalism was established and the monasteries gave their protection, was there any revival in the interest in medicine. The school of Salerno, a vast and mighty institution, was a product of this age, and its pupils among the greatest and best versed in the healing art; but this school soon fell behind, and its departed glory was all that lived; its ruins are silent, but it marked an epoch in medicine, and upon these ruins have been founded institutions, whose children have nourished its science.

We come now to what may be termed modern medicine, the age of the renaissance; we may see how minds were reorganized in every branch of knowledge; how investigation succeeded investigation; how the lethargy, that had almost paralyzed letters and science, was thrown off, and how like giants aroused, the people shook themselves from their Gothic bonds, and acknowledged their own power to lead, rather than to follow; saw in themselves as if awakened from a stupor the meaning to attempt new things and achieve new ends. We can see them, despite the edicts against dissections, despite the threatenings of the laity, with the church hurling its anathemas against them, with the bishops thundering against them, we can see those pioneers of modern medicine go forward, seeking out the causes and cures of diseases and denying not those whose abuse they bore, and whose insults and reproaches were heaped upon them. The church, Mr. President, and I say it with the knowledge of history, and as a fact which cannot be refuted, the church, in these early modern times, awakened as it was to its dream of social power, was the most unrelenting foe, which the art of curing had to encounter. Its priests, full of superstition and awe, their power subdued as their people became wise, their despotism diminished when their people saw the light, were most pronounced obstacles to the steps of medical research; and not until revolutions, and social upheavals, and religious reformations purified the body politic, and taught the church that its mission on earth was not to govern but to save souls; until these things adjusted the laws of living and changed religion from a per-

secution to holy love man for man, did an era of medical history begin, which until this day has been placid, serene, like the waters of an inland river, only broken now and then by some mountain gust, but deep and firm on its rock bed, flowing, flowing, ever flowing and widening as it flows. The names of the workers in this era are many; men honored for their benefits and men, lowly and hidden, have added to our storehouse of information; and though some in this latter day have sought, contrary to the ethics of their calling, and the principles of the brotherhood, to reap sordid rewards from their work, the great majority have shown an unselfishness rarely seen in men and have freely and without price given to us the fruits of their labor and of their intellect.

From this rapid and cursory history of the medical past, what, Mr. President, may we forecast as to its future? As remarked before, many happenings cannot be mentioned; there were many actors on those stages whose names will live forever; many have naught by which to be remembered but the cherishment of their noble deeds by the unwritten histories of their science. But does its record in the past lead us to hope for its advancement, steady, and continued in the future? Can we hope that our art will keep pace with the world's progressive march? They tell us, Sir, that in the olden time, before the beauty of Christ's kingdom had come upon the earth, and before the walls which surrounded the Eastern cities had fallen by that love which He taught men, one for another, it is said that upon these walls, stationed in little towers upon them, at dusk of the day were placed the watchman; fearing foes from without, these sentinels were placed that they might peer into the darkness, and if needful alarm the people; and all through the night, dark and still, when the great city was hushed in sleep, and no voice was heard save a sometime whisper from sentinel to sentinel, the cry would up, "Watchman, tell us of the night"? Dost thou see any danger? Dost any enemy attack? And the deep-toned voice of the watchman would give back the welcome sound, "The Lord is mighty and will prevail; the Lord will protect His children, the people of His loins." And the quiet city would slumber on, having faith in its keepers and having faith in its God. Watchman, Ye of us, who are now posted on the walls, and in the front of this mighty medical advance; Sentinels, whose duty now it is to keep your eyes upon the coming hosts of pestilences and diseases; Actors upon this present stage of your life's

work, look forth from your places of trust into the great future and tell us of its darkness, tell us if you can, what will be the history of medicine in the days to follow; tell us, shall we become, or shall we not, greater as an art and greater as a science? Tell us, Ye watchman, whose duty it is to watch, are we of to-day teaching that worldly gain is the end to which we strive? That worldly power is the end to which we strive? or are we so doing that the next century of doctors can say of their fathers, that they were men, whose chiefest aim was to instill the truths of medical science and the beauties of its art.

In noticing the destiny of the art and science of medicine, I shall in no wise attempt to point out any purely technical advances or discoveries; there will be many and what they will be I nor any one else can tell you. But there will be some happenings, which I think can be argued from its past history, based principally on the laws of social economics, to which I will call your attention. And first I will remark, that investigations and inventions in medicine will keep pace with those in other fields of science. Though as yet we are by no means fixed in many of our theories, and though many of our practices may be at fault, yet they are day by day being re-enforced by the discovery of new evidence or are being discarded with the promptitude that becomes true scientists; and day by day, and so on in the future will it be that the hands of investigators will be more loosely tied by public clamors and more and more as the world grows older, true medical work will be detached from assaults and sordidities, and men and women will "God speed" to the band of brothers, whose duty it is to explore the hidden beauties of the body. So that the Watchman when we hail him, can say, I see the study of our art fuller, richer, more enticing to men because they see more fully the fruits of it. The Church, too, will aid us; for many years our enemy, because of false leaders, it is now our friend, and more in the ages to come than now, or in the times that have passed, will its priests and our profession labor together to teach the people the mysteries of the life here and of the life to come. It would be beyond any, Sir, to presage what advances will be made along the lines of medical treatment; that there was ever an increasing ratio of cures from the initiatory of our art until now, would warrant us in the statement, that this increase, but in greater ratio, will continue; whether it will be due to the surgeon's knife or to the physician's tile I know not, nor do I care; the glory of the

one is the glory of the other; whether it will be the result of present theories, or those to be advanced later need not concern us now; all the great revivals in medical thought have been at the expense of other theories then well grounded; the discovery of the circulation by Harvey overturned the beliefs in "Humors"; and the apparently fixed hypothesis, upon which we are working to-day, sepsis and anti-sepsis, were pronounced over the funeral of the doctrine of "The spontaneous generation of the diseases." And so it may be, that, as opportunity is given for more thorough invention, by more scientific laws, our views, stable as they seem to-day, may be set aside; but if so, they have been links in the great chain of logical reasoning, and must be given full credit for their facts. I believe, Mr. President, that this creation was founded, not only on a just, but on a scientific basis; that there is somewhere, somehow in His vast kingdom a something either of earth or air or water, that will cure all our ills and conquer the sting of death; the time has not yet come for man to have the fullness of this knowledge, but one by one and little by little they are being found out; slowly and step by step the ingenuity of man is being taxed, and surely, surely the boons are being vouchsafed to him. It is not too much to predict, in the light of past experience, that sepsis will be conquered, that infection will be conquered, that diseases which now seem hopeless and which presage an early end will be conquered and that the sum total of human life will be increased.

Death, Mr. President, is a divine mystery, and in these remarks I do not wish to gainsay it; far be it from me to say that the issues of life and death are with man; for never can there be here human agencies to subdue the natural decay of the body; the laws of metabolism and katabolism are fixed and certain, and that they lead sooner or later to the grave is known to us all; but the cycle of life can be made to revolve more evenly and the sum and happiness of our human state be added to. The means of saving life has been the aim and study of man since civilization began. The primary object of all our beneficent institutions to-day is the protection and preservation of human life; our great fire departments attest this; our safety appliances on all our systems of public travel prove it; the gigantic chain of light-houses and light-ships upon our shores and upon perilous shoals, and the line of snug looking cottages that gird our coasts teach us that death is robbed of many a victim by man's devices. Just after the storm of last August, Ladies and Gentlemen, I stood upon the golden-

hued shore of the great Atlantic; it was the morning of a summer's day; over-head the sun with matchless majesty shown down his rays sparkling and glancing upon the pebbly beach, while all around was wreck and ruin wrought by the mighty blast. The hurricane had well nigh spent itself; far out as the eye could reach I stood and watched those mighty billows, white crested, angry, moving with the might and power of a Titan, resistless, sweeping on and on till with a mighty crash they hurled themselves upon the shore. The tumult of these waves was sublime, and I said to them, Great hoary-headed monsters of destruction, great towering bulwarks of power, great monuments of your Creator's majesty, Stop, Stop, I pray you and tell me, O tell me, how many of God's Creatures have you buried today; how many in all ages passed; how many for the future? You, the great, ponderous, mighty, cruel, resistless sea, the thunders of whose billows shake your Makers throne, the wail and anguish of whose breast makes the angels quake, tell me if never, never, never, you will be appeased; never softened; never placid, as were the waters of old Galilee when its Lord and Master said "Peace be still." But no sound gave forth that old deep, but mourning, and pounding, and thundering, and crashing it came on and struck that shore like some blow from a mighty hammer. But as I stood there, there came a figure of a man; he had coiled about him a skein of rope, and over and anon looked out over the troubled waters; I knew him to be, from his weather-beaten face and simple garments, a lifeman on his beat, ready and able and willing to put his life in danger, yea to lose it, if by doing this he could succour his brother; I knew that this rugged hero was engaged as you are in trying to save man-kind; and I said to the Sea, O Sea, You great, glorious, magnificent product of God, into whose capacious maw go day by day many of your Makers creatures; you greedy, hungry, terrible monster in your wrath, know Ye, know Ye, that the same infinite hand that made you and that made all the universe has given into the hands of the children of men to rob you of many of your victims; to wrestle with you, and though you yet claim many, willing hands are stretched out and brave hearts beat with the purpose to succour and to save. And just as means and devices for saving men from the sea are being improved by man's ingenuity, and modernism, even so we of the medical world are advancing and still advancing toward robbing pain and prolonging man's

existence here below; and just as their means will be multiplied, so shall we, if not in this generation in some, have the fullness of knowledge, and be blessed even of our enemies. I believe, Sir, that there will be a unification of the different schools of medical teaching; that the Homeopath and the Allopath and the Regular and the Eclectic will meet upon common ground. Upon them all rests alike the responsibility of human life, and in all should be alike the divine essence of helpfulness in need, and finally, each and all, feeling the humanitarianism of their calling, and softened toward each other by a reflection of their high and mighty aims, will cease hostile criticisms, will lay aside bickering and carpings, and will make a common platform the greatest good to suffering mankind. And, Sir, in that time truths of mighty power will vanquish charlatanism quackery and all the schisms of medicine; will exterminate the beliefs in "Christian Science," and will blot out her claims to notice; the beliefs in witchcraft in the early modern days were tampered and cast out by the openings of more advanced medical research, and all like beliefs must and will finally give away before the teaching of the truth in science; and as witchcraft and its kindred evils vanish in the light of the eighteenth century, so also will the juggleries and impious impositions practiced in this day by "Divine" healers be blotted from the earth. I tell you, Sir, that the open dissensions between medical men of today, and the different existing schools and views, are the most fruitful sources of frauds and pernicious practices, and hasten the day when all true believers in our art as a scientific one will unite to, not only separately, but unitedly condemn and put down such institutions, and unitedly protect our people.

There will come a time in our future, Mr. President, when the practice of medicine will be more a labor of love and less of money than it is today; I do not believe that the most devoted one amongst us could believe this to be true now. This is essentially a moneyed and a money making age, and our profession has too much the spirit of gain; our work should be on the plane above this, and that era in the days before us that sees the most thorough divorcement of medical work from greed, will see the most wholesome and beneficial advances. Better will it be for the future doctor that he become like one of the old Benedictine monks, who with nothing but his staff and wallet, and without price, ministered to the body and the soul, than that he sink the nobility of his calling to

the level of worldly gain. I do not disparage the proper getting of money; it is a great power for good, and a wholesome thrift enhances man's self respect; but I do say, and say with emphasis, that a review of the past has taught us, that in no age in the history of medicine has true scientific work proceeded as slowly as when the world was money mad. When all the worlds power was centered in Italy, and greed and avarice consorted with vice and indolence, then were the darkest days for us; and feudalism, when first it was established a promoter of scientific work, became as it grew great and mighty, less helpful to its progress; and, Sir, it is true of all times and all peoples, that devotion to the arts and sciences bears an inverse proportion to devotion to wealth; this age has shown great progress in this direction, but how much greater might it have shown, had the minds of the people been farther removed from avarice; the fact of this progress by no means discredits the theory. And we individual physicians will be ennobled and be made to feel more pride in our work when money ceases to be the chiefest object of our actions. Money, Sir, cannot pay us; riches cannot relieve us of our responsibility; it cannot help us to that place in the hearts of the people whom we serve, as can a pure devotion to our calling, separated from all considerations but to be benefits to society; and this should be instilled into the minds of the laity, that their doctor, if he is a true disciple of his calling, who goes in and out their homes day by day, who listens with patience to the tales of their sufferings, who is their select confessor of many a wrong who submits his body to toils by day and to storms by night, who is with them in the hour of travail and in the day of death, cares more for their grateful words, more for their sweet sympathy when he is anxious, more for their words of encouragement, than for their gold. God grant that this day will not be long in finding its fulfilment.

Again I remark, Mr. President, that the future will see a more perfect fellowship amongst physicians of our own school; it will see more of concord and less of enmity amongst them; it will see jealousies and fault-finders growing less and less; they will have more light, and out of their wisdom will grow peace; they will have less selfishness, and out of this will be born a greater charity; it will see them united for the better ruling of men; not in the matter of statecraft, or that they will wallow in the quagmire and filth of modern politics, but united to set in motion laws looking to the healthful enterprise of their calling, and to

the betterment of physical man. It will see medical societies more flourishing, with larger memberships, and it will see a more wholesome effort on the part of the doctors themselves to encourage such gatherings; and I hope it will see in and among the members of these societies no thoughts of self, no schemings for the places of distinction, but only a full intention to make them occasions of more thoughtful reasoning, of happy commingling one with another, and the mothers from which shall spring true creeds, sentiments of brotherly love, and great inspirations to lead us on. And, sir, I am glad that the women of this delightful and happy little city, the home of beauty and hospitality, have taken the interest to come out to-night, even to hear a prosy address like this; for we are not, many of us, speakers, Mr. President; we are not versed in rhetoric nor trained in oratory, and yet it should thrill the dullest of us, when we see listening to us our mothers and sisters and daughters; they are, sir, our friends; with them we have stood at many a bedside and seen fall their gentle tears: with them beside us, we have fought for their children many a battle with the grim giant of "death;" beside them we have stood, and seen them, without murmur or complaint, groan in agony for the nourishment of the world; and to them, the mothers of us, and of man to come, do we come and say, O Woman, Woman, the help of man long ages passed, his hope in times to come, we thank thee that thou art endued with heavenly gifts to be our hope and refuge for time, now and forevermore.

But I must hurry on; the State in a few years will take fuller charge of matters medical. This is in some degree true to-day, but health laws and scientific matters are destined to be more largely the concern of the national government. State health boards and municipal health boards are correct and useful institutions, but their scope and duties should be increased and their power amplified, and there should and will be established a uniformity of action between them: to this end we will have a central body hygienic, which shall have general jurisdiction over, and direct all matters pertaining toward increasing and perpetuating the health of the nation; we will have at Washington a Secretary of Medicine and Hygiene.

There will be fewer medical journals than now; not in the immediate future will this be, but when that era appears in which man's interest will be to serve man rather than his pocket; there may be more given to original work, because the fund of knowledge will be greatly increased, but

our desks will not be surcharged with a pile of literature, one page of one periodical being another page of another.

There will be an abolition of all obstructions to anatomical and physiological investigations in the matter of vivisections; no "Gallinger" bills will confront us; no anti-vivisection societies will endanger the progress of our work, because the people will be so observant of the good that follows these sacrifices to the science, that the promoters of such schemes and propaganda will be met with the frown of an indignant public. No obstruction to health laws and health habits; no opposition to vaccination and no suppression by boards of trade to a full exhibits of all knowledge and information pertaining to existing epidemics. I think, sir, that this, the last, will be a great step in the way of public benefit; for all of us know how laboriously, how strenuously, how persistently the world of commerce in each burg strives to shut up, within its own walls, all details and histories of fell diseases, because it means to them a loss of dollars and cents, while to their neighbors it may mean suffering and death.

Mr. President, and Fellow Members, I have pictured to you a roseate sky for the future of medicine; I have pictured to you a future, whose physicians shall bow down to no golden calf, but who shall have for their Highpriestess love of and their duty to mankind; I have pictured to you a future when benevolence and right shall be uppermost in men's minds, and love and charity their creed, and I have done this because I believe it. I believe it because I believe the world is growing better; I believe that the blood spilt on Calvary was not without avail; I believe that eternal justice still sits enthroned; I believe that the faith of the people rests with us; I believe that my brethren's fidelity to their cause is an inspiration, and I believe in the just conception of our art, and in its ultimate triumph.

But to accomplish these ends, to pass to our posterity a heritage full of promise we must labor; singly and united we must work and present ourselves a solid phalanx against false doctrines and heresies; we must purify ourselves by the fire of eternal sacrifice to duty, and must make a masterly struggle with every foe. Progress in all things must meet with obstacles and has always met them; to surmount them is progress. But medicine will continue the paths it has begun, and just so sure as "Truth crushed to earth will rise again," will the truths of its science be finally acknowledged of all men. And so we must go on, for the mountains in our paths are growing lower,

and we of the present are beginning to see the vast plain of the eternal faith of the people in us; we must answer back when assailed by believers in quackery; when confronted by the mistakes of our forefathers; when told that our beliefs are unfixed and that we battle among ourselves, we must answer back that we ourselves have faith in our art, and that we will continue to labor that you all may have faith in us.

And, sir, no opportunity must be let pass; there are times in the lives of all physicians of acute observation, when points of great interest to the profession can be noted, and when, even with the most obscure, facts bearing on some hidden mystery of life may be evolved; we should remember these, see to it that they are added to the great storehouse of medical literature, for from small observations sometimes grow the most stupendous benefits.

Let not your diffidence cause you to neglect small things; this attention may not make you great, as it did Jenner, who foresaw the future benefits of vaccination from his observations of a dairy-maid's hands, but it may be comforting for you to know that to the vast fund of medical lore, to the great mounds of medical literature, which shall guide your children, you have contributed your mite.

I wish to say in conclusion, Mr. President, Ladies and Gentlemen, that from the earliest days of our history, the physicians have been honored members of society; that old Hippocrates, our father, sat in high places with the rulers; that Galen was the trusted friend of the Roman Emperor; that Vesalius, the great anatomist, who disputed the carcasses of criminals with dogs and vultures, that he might dissect them, had for his patron the mighty Charles the Fifth, and in the time to come, while we may have no monuments but grateful hearts, the doctor even more than at present will be an influential member of the social body, a worker for the peoples' weal; they will be teachers of public morals, and welders of public thought.

I wish to thank the Medical Society, Mr. President, for giving me through its committee this place of honor. As I stand here to-night, and see before me hairs grown grey in their labor of love, and forms bent by the rigors and storms of many a winter, yet fired with the conflict now going on between truth and untruth, facts and myth, science and schism, I feel that I ought to say to the younger members, and that they should say to their younger men, and they to theirs, "Behold what work your fathers have done; behold how they have labored

and delved for the good of humanity, and yet behold we are even now confronted by unbeliefs, and by superstitions, and by false doctrines." And we must continue their work; we must wage eternal warfare against our enemies; we must, believing in the justice of our cause, keep up the battle just begun; we must have the courage, that did old John Paul Jones of the good ship "Ben Homme Richard." You remember that great sea duel; how one glittering star-lit night this old hulk, an old merchantman with guns on her, her sides gaping, her masts toppling, but girded by immortal genius for one death struggle, you have read of how this autumn night she approached the Scottish coast, and grappled in deadly embrace the English frigate. The story of this struggle will live as long as the deeds of men; you have heard your fathers tell how these two giants of the ocean approached each other nearer, nearer, nearer, until peak to peak, and mouth to mouth they lashed themselves, while their guns throbbed and hurled death and hell around them. You can picture the fury of battle and see the flashings from these hot-mouthed muzzles mingling itself with the silent light of the stars; you can hear the ponderous sound of the mighty cannon, the shrieks of agony, the crash of timbers, the scream of the shredded rigging, the death cry, and amid it all you can hear the deep tones of that matchless commander move his men to death; you have read of how the ships took fire; of how the sea and heavens were lit by the horrors and panoply of war; you can see the old ship stagger, stagger, stagger, swing apart three times and three times grapple with her foe; you can see the doom of both; you know the end. You know that when the British captain, his dead around him, his ship reeling and helpless, but his batteries still hurling their deadly missiles, himself wounded, when his foeman's fire had for a moment slackened, called out, "Have you surrendered!" that this captain of our American navy, this great man, this hero, who had been cast aloof from his home and from his friends, answered back amid the thunder of his guns, "Sir, I have not yet begun to fight." What an inspiration to American seamen, and what a tribute to American valor is this immortal answer, as it comes down to us through the years from the lips of this, the greatest of American commanders; standing himself in the very shadow of death, on the deck of his bleeding, dying ship, he gave to his followers words which shall lead them as long as America's vessels protect America's shores. And, sir, we of the profession of medicine have just begun

to fight, and because we see struggles ahead (thank God they are growing less and less), we must keep up the warfare now begun; we must and will be conquerors against our enemies.

I wish before closing to thank you all, Ladies and Gentlemen, for giving me such patient attention; I have given you only my own impressions as to the hidden future of medicine. I do not believe that very many mysteries of human life will be unveiled for a long time to come, and some of them never: while each year yields us vast discoveries, and important ones, yet the intricacies of life are so varied and deep that the mind of man may never contemplate them all. I have only tried to point out in a general and disjointed way what probably will transpire in the times to follow; nor do I expect the agreement of all my fellows; as we differ about things present, so we will differ about things to come; the chief dangers to our progress now are the various dogmas and unsafe teachings which are sweeping over our land, arrogating to themselves divine properties and divine powers. To these, chiefly, must we address ourselves, and against these must we wage unceasing warfare. We of to-day, sir, are the rear-guard of a grand army; we are the van-guard of a grander; they that have gone before have fought their fight; have kept the faith, and have left us an heritage of great principles, of great deeds, of great responsibilities; we, and those that come after us, must look to see these principles and these deeds kept safe and inviolate. We must keep a safe lookout; we must post sentinels; we must put watchmen on our walls, and must leave to our children an heritage, which shall cause them to rise up and call us blessed. And, Mr. President, away down in the ages to come, when the book shall be opened, and the old chronicler is asked to tell those then living what of the past in medicine, he will answer, WRITE, I saw a mighty fabric woven in the times of myth; I saw it nourished in the time of Cæsar; I saw it greater and stronger in the middle ages; I saw it in early modern times a mighty structure, with its myriads of workers, and I saw then its great glory and its path of destiny. I saw the men of the nineteenth century earnest, and honest, and eager to know, and since I have seen it tower upwards, and upwards, and upwards, until now it has towered above all its enemies, has surmounted all its trials, and stands a mighty and colossal monument to the power and grandeur of man.

Should Physicians Supply the Medicines they Prescribe.*

By David S. Morrill, M. D., Farmville, N. C.

There was a time when every physician supplied all the medicines he prescribed. But with the discovery of new medicines, and the increasing demand on Physicians for a more thorough investigation of diseased conditions, together with a desire for more palatable remedies than the already busy practitioner thought he had time to prepare, the pharmacist made his appearance. And for a time his advent was hailed with encouraging hope for his success, and ultimate establishment in an honest profession.

A period then followed in which practically all physicians, except those located in remote districts, gradually commenced to put their bottles aside, and to place the whole responsibility of preparing and dispensing their remedies on the pharmacist. In those days the pharmacist was a man who attended solely to supplying medicines prescribed by a physician. For a time this new order of things worked well. The physicians were satisfied, and the profession of pharmacy seemed well established.

While this method of medication relieved the busy practitioner of considerable work, and divided his responsibility, it was not so satisfactory to his patient, who preferred to have the medicine administered by the physician he had summoned, and who could not see the justice in having his suffering needlessly prolonged, while waiting for a pharmacist to prepare and send his medicine.

Naturally enough, on the part of the public there was much opposition to this system—a system of unnecessary delay. And when they came to consider that instead of paying the doctor \$1.00 or \$2.00, as the case might be, for his visit and medicine, as was the custom once, they now had to pay him the same amount for a strip of paper and the pharmacist 50c. for the medicine, with the additional annoyance of having to dispatch a messenger to have the prescription filled, people soon became impressed with the idea that for all minor ailments they would go direct to the pharmacist and thus avoid the intervention of the physician. But here, too, they occasionally met with disappointment, for there were some pharmacists who would not counter-prescribe, and who were tireless in their

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efforts to explain the difference in the work of the physician and that of the pharmacist, endeavoring to show how they could not prescribe without going beyond their province, and beyond their teaching, and violating a social trust.

But with the rapid increase in number of the pharmacists, and competition, and a constant outpouring of patent nostrums, a great majority of the pharmacists began business on a larger and more independent scale. They commenced to refill prescriptions without instruction, and counter-prescribing became a very important part of their work.

Finally physicians generally were aroused and began to think seriously, and, on realizing that when called to relieve the sick they were armed with no therapeutic agents other than those contained in a lead pencil and a pad of blanks, they soon realized their inefficiency and absolute inability to administer directly to a sick person's wants.

This condition of things was the cause of a majority of the more practical medical men casting their old habits aside and bringing into actual every day practice a more humane, reliable and satisfactory method of medication; and the results have been so satisfactory to all that now only a small per cent. cling to that fashion of making their patients a professional call with no remedies or means to relieve suffering other than the pencil and pad of blanks, and leaving behind him no consolation, but rather a painful reflection on the uncertainty of the future and what it may bring, if anything.

There no longer remains a doubt in the minds of the majority of medical men that the tremendous outpouring of patent nostrums, and the readiness with which they are consumed by public delusion, ingrafted in the mind by voluminous advertisements and countless testimonials, is extremely harmful to mankind. Not at all from a business standpoint with the physician, but from the fact of the unfortunate conversion of many acute diseases into a more exaggerated or even chronic character.

A person who feels a little dull and disinclined to go about his daily pursuits, reads in a newspaper an extensive essay, written presumably by a subject suffering in a similar manner. The writer pathetically, and even dramatically, describes his dull frontal headache, his complete loss of appetite, an occasional flush of vertigo, a foul tongue, and a heavy feeling in the back. He goes on to state that after consulting several physicians, each of whom had failed to relieve him, but had expressed doubts as to his final recovery, he was at last, as a final

resort, induced to try Regulator—it matters not here what Regulator—and after taking it for two days was very much relieved, and on draining a third bottle was entirely restored and able to perform his usual work.

And there is the needless suffering to which young children are subjected by the reckless use by parents and nurses of mixtures of unknown power for doing harm, containing agents of which they know nothing and suggested by some person of utter ignorance of the fitness of medicinal remedies.

A few months ago my attention was called to an infant, who having had some symptoms of malaria, had been drenched with a teaspoonful of Groves' chill tonic, every three hours, for several days. And we, who are familiar with the harshness of that preparation, can imagine the expression of bodily suffering manifested by that unfortunate victim.

With the physician supplying the required medicines a great deal in the way of expense, and much more in the way of ease and comfort, is saved to his patient. This system, of course, gives the doctor more work, and enforces upon him a greater expenditure for drugs and general supplies, thereby subjecting him to more chance for loss by fraudulent patients.

But even all this should not be considered any serious obstacle in the way of the physician supplying directly and personally to his patient the remedy best calculated to meet the requirements of the case. When people find that they can go to the doctor and get the desired remedy without being subjected to the annoying delay and additional expense coincident with the intervention of the pharmacist, they will naturally have a tendency to refrain from seeking the grocery, or the general merchandise store, to find the desired medicinal remedy. The physicians of this country are better off than the nostrum-makers live, but the consumers would be better off if they were all dead.

The medical man of the present day who cannot easily, pleasantly, and quickly, supply to his patient any medicine required, is surely behind the times.

It has been argued from time to time that carrying medicinal agents and the manipulation necessary in the preparation of powders and the like for administration, interfered with the dignified bearing a physician should maintain; but it seems to me that a true physician should be so devoted to the art of supplying remedies to relieve suffering as to be willing to subordinate all other things to that.

DISCUSSION.

DR. CHAS. J. O'HAGAN.—Dr. Morrill has written a very good paper and it is packed full of good sound sense but he cheated us in the very slipshod way in which he delivered it. Doubtless however it will read better than he read it. I believe the moral of it is that it would be a great deal better for the medical men to stick to the old practice instead of buying synthetic compounds. The physician gets into a careless habit which demoralizes his mind. I hope Dr. Morrill's paper will call your attention to the deleterious effect of these compounds.

Annual Debate for 1900.*

By James M. Parrott, Kinston, N. C.

In discussing the continued fevers of North Carolina, I shall exclude of course the simple or ephemeral fevers of a few days' duration, as well as the exanthemata, their complications and sequelæ. I shall also refuse to consider the classical typhoid and malarial fevers of the text-books. It is quite an easy matter to make a clear cut positive diagnosis of the typical fevers, even to the casual observer.

In many vicinities of North Carolina, particularly in its Piedmont and Seaboard sections, many fever patients are seen annually the exact nature of whose malady it is very difficult and often impossible to determine. It is about these cases as seen at the bedside in North Carolina that I wish to speak. What are these fevers? Are they really malarial infection, or one of typhoid fever? Or are they manifestations of an infection of both typhoid and malaria, or a third form of fever of continued nature which has not yet been recognized and described?

The symptoms of these continued fevers vary much. Indeed, it is quite difficult to describe a difficult case. Many begin with a rapid rise of temperature, while with others it is slower; in some the pulse is full and bounding, accompanied by severe headache, congested eyes, flushed face, general integumental redness, and many other evidences of a disease sthenic in character; in others the pulse is more or less gaseous and slow, accompanied by lusterless eyes, mild headache, skin of dull hue, marked lassitude, and prostration, giving us a picture of a malady of an asthenic nature. In many cases these types merge one into the other, often the sthenic into the asthenic,

and even the asthenic into the sthenic, during the course of an attack.

Some time ago I was called to see Mr. J. W., whose illness subsequently beautifully illustrated the sthenic cases. He was taken rather suddenly with no noticeable prodromes. When seen on the second morning of his illness he presented a raw-beef tongue, (so often seen in these cases, and generally meaning several weeks of serious illness), severe frontal headache, great restlessness, backache, rapid bounding pulse, general hyperæmia of the skin, high temperature, congested conjunctiva, slight constipation, and rather scanty highly colored urine. For about two weeks these general symptoms continued accompanied by much nausea, and later by slight abdominal tenderness, but never by delirium of any consequence even though temperature persisted very high for several days. His symptoms then began to improve, accompanied by several exacerbations of two or three days' duration. He was sick six weeks and convalesced slowly.

Another type: Later I was called to see Mr. P. H., on the 10th day of his illness. His symptoms were almost opposite those above enumerated. He was weak and depressed, and had been from the beginning. When examined he had tympany, no pain over abdomen, occasional free fecal discharge, though generally constipated, tongue slightly coated with a tendency to a sharp red edge. No delirium, generally very quiet and listless, exhibiting a tendency to collapse; pulse weak and gaseous and fever ranging low, from 100 to 101. He remained in this condition for two or three weeks, then began to improve very slowly. Sick six weeks.

Still another type is often seen. In October I was consulted by C. H. on third day of sickness. Complained of pain in limbs, cold chilly sensations, foul odor of breath and bad taste, and tongue presented a peculiar condition often seen and always indicates three or four weeks' illness; it was coated white and had the appearance as though tissue paper was pasted over it, and was slightly red-edged, though large and flabby, and presented teeth indentations as do most all tongues in adults in Eastern North Carolina when sick. He complained of very great depression; pulse were slow and weak, there was no nausea and no pain in abdomen, though slightly tympanitic and constipated. No rose colored spots appeared during the attack, and at no time was he delirious. Temperature ranged for first ten days from 102-103, suddenly dropped a little, then ran an even downward course, gradually growing less until

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at the middle of the third week it reached the normal. Positive widal re-action dil. 1-40, time exposed one hour, no malarial organism found, quinine had no effect on temperature.

The following interesting case treated last fall in Cuba has a counterpart which is often seen in Eastern North Carolina. Trooper W. C. gave history of previous malarial attacks when taken; temperature rose rapidly and ranged high, tongue coated, large and flabby, headache, slightly nauseated, no delirium, liver and spleen enlarged, some abdominal tympany but no pain, pulse weak and slow, patient generally quiet and lassitude marked. Crescent and æstivo-autumnal malarial plasmodii found in blood. Widal test always negative, thoroughly cinchonized and kept so for some time, the quinine continuously administered, but in smaller doses, æstivo-autumnal organisms rapidly and promptly disappeared, but even after cinchonism could very often find the crescent organism, especially in the splenic blood. What caused this fever to continue? Was it the toxæmia from the æstivo-autumnal plasmodii, or the direct result of the crescent organisms themselves? Very probably the former, for reasons which are obvious and which will be discussed later.

These four cases illustrate very nicely the different types of the continued fever under discussion, though others not presenting such marked differences could be mentioned, and to these might be added those which continue for many weeks and are of a very low grade and resemble case No. 2 above mentioned except that fever is somewhat lower and lasts much longer. Now then, the question is what are these fevers, and to what are they due? To answer this intelligently many problems must be solved; causes which lie behind all fevers considered, every symptom discussed in detail, the idiosyncrasy of the subject thoroughly understood, and the different methods of treatment weighed.

In all cases of fever whatever may be the cause there is oxidation and increased combustion. A certain per cent. of the energy which should go to form tissue or to repair waste cells is diverted from the normal course; it manifests itself in obedience to certain physical laws in the shape of animal heat, and there is consequent a rise of temperature. Acids are produced as a result of this increased oxidation. This combines at once with certain salts to form bases. These acid and base forming processes take place back in the extra capillary structures, and, of course, there is to a certain extent a lessening of the normal alkali-

linity of the blood. This abnormal condition stimulates the thermic centres, and as a result there is again an increase of temperature through physiological reactions. Once these processes are begun they must either be checked through nature by medication or else by nature alone. In many cases of a long continued fever of a very low temperature, say from 99 A. M., to 101 P. M. I have no doubt that this is the true cause, especially in those of the so-called gouty diathesis.

Another point to be considered in discussing the continued fevers of North Carolina is the idiosyncrasy of the patient. We are all acquainted with peculiar effects of quinine, morphine and other drugs upon people. The cinchona alkaloids cause in some cases asthma, in others, an eruption with severe nervous symptoms; in others still, the most violent congestion of the kidneys with accompanying hemoglobinuria or hematuria and so on. These effects are denominated the idiosyncrasy of the patient. May not patients have an idiosyncrasy for malarial or typhoid poisons? I have seen peculiar cases of both these fevers which I thought might be due to an idiosyncrasy of the patient for the particular infection.

Again, that quinine is a specific for the amebic forms of malarial organisms I do not doubt. So that when a malarial infection in which only the amebic form of the parasite is present if it is properly treated with quinia the temperature should be markedly affected and the patient promptly relieved, provided it is an uncomplicated case and the excretory organs are functioning properly. The question is what do you consider the proper way to administer quinine? It is not my purpose to discuss the treatment of malarial fever, but a few remarks just here may not be out of order. As I have said before, quinia will promptly and certainly destroy the amebic forms of malarial parasites, hence it should be administered before the paroxysm. The simple giving of quinine by the mouth without regard to its digestibility is a practice to be condemned. The most scientific and, of course, the most accurate way to administer it is by the hypodermic needle. This is not always desirable, however, and indeed it is not often necessary. I once saw a case in which large doses of quinine were given by the mouth and had been for some time, and yet it was easy to demonstrate the presence of the æstivo-autumnal organisms in the blood. Hypodermic injections of the cinchona alkaloid were advised and given. They acted nicely and the patient was promptly relieved. In this case the quinia was not digested and the attending physi-

cian evidently thought the nervousness and its attending manifestations, and a severe nausea produced by the alkaloid to be the symptoms of cinchonism, and decided that he must be dealing with a case of typhoid fever since the patient grew worse instead of better. The discovery of the parasite in the blood and a careful investigation soon unravelled the mystery, however. Quinia in this case by the mouth aggravated the condition of the patient.

Again, there is no doubt in my mind that many cases of severe malarial and so-called gastric or ephemeral fever, are continued and aggravated by errors in the diet. I have seen one case of typical typhoid made atypical by such a mistake. I consider the diet a very important feature in proper treatment of malaria, and the most important by far in the treatment of the so-called gastric and typhoid fevers. There are a few facts which I would mention especially. The most easily digested all-round food is the one that should be selected. When carefully prepared, predigested soup and milk is the best. The patented proprietary meat extracts, and so-called peptonoid foods so commonly sold are generally to be condemned. In my limited experience I have always been highly pleased with the results obtained with good home-made soup and fresh sweet milk. Many cases of fever, in which the diet has been neglected, presenting the typhoid conditions, viz: muttering delirium sordes on the teeth, hard dry brown cracked tongue, feeble pulse, etc., are rapidly improved by wholesome food stuffs properly given; by this I mean administered regularly, and with due regard for common sense, and generally recognized physiological laws.

In some cases of continued fever the excretory organisms do not eliminate the toxin or germ poison because of their previously enfeebled condition. The case of the trooper whose case I have given above is a splendid illustration of this condition. In this patient the excretory organs had been enfeebled by several previous attacks of malaria, and after the quinia had destroyed the æstivo-autumnal organisms the fever was very probably continued by the persistent presence of the toxin, should there be such, of the parasite. I am not prepared to say that in this and other similar cases that crescent form of the organism produces the continued temperature.

Manson and other prominent observers have taught us that the crescent organism is a regenerative type of the parasite. If this be true, very probably a careful daily examination of the blood of these patients after quinine has been discontinued would

demonstrate the presence of the organism more fully developed, and the long continued use of the cinchona alkaloids should eventually free the patient of the crescents by destroying their source. This might be equally true should the crescent prove to be a degenerative form of the parasite. There is one thing, however, about which we are all positive, and that is that in all cases of remittent malarial infection the fever continues more or less for a longer or shorter period after the organisms have disappeared. If it be true that in one otherwise healthy and whose organs were normal before the attack the temperature persists for a short time after the destruction of the parasite because of malarial toxin, why is it not equally true that it might continue a longer time in one previously debilitated and whose organism were functioning below normal prior to the infection causing their inability to throw off the poison?

To the student of medicine, one of the most striking features of disease is the marked difference along certain lines of the same disease in different sections, and of the close resemblances of those differences in certain other sections. There are characteristic and striking symptoms which are common to many infections in localities of the same general hygienic condition. To illustrate: the peculiar action of the pulse in yellow fever is seen very often in other diseases in the tropics, especially in fevers.

Last summer while in Cuba I noticed quite often that on the third day of a remittent malarial attack, instead of the pulse continuing rapid as it should in a typical case, it would fall in frequency very often as low as fifty per minute, and after a few days regain its former ratio to the temperature. I have made the same observation concerning the temperature. All of us who live in a malarial district are familiar with the phenomenon of the third-day aggravation of symptoms, and also that in all these cases of whatever nature, that quinine to a more or less degree will prevent more or less this periodical exacerbation. This is a common everyday experience. Why are not other symptoms of other fevers affected by the same cause whatever that may be? From these and other observations I am led to believe that the environment of germ and patient has much to do with the symptoms of any fever infection for this reason: those of us who live in the Piedmont and Seaboard sections of North Carolina may expect to see typhoid fever manifest itself in a very different manner in many instances from that of the mountain districts. Improved sanitation because of

better drainage, and other accompaniments of progress have changed the environments of germs, especially of typhoid fever, and of man; hence those of us who live in Eastern Carolina no longer so often see the old time typhoid fever with its classical symptoms, but in its stead there has developed another fever which, in my opinion is, in the majority of cases, typhoid being marked by many symptoms not met with before.

In closing the consideration of the causes of the atypical continued fevers, I might add here that there is no doubt that many cases of continued fever are not really continued fever in the common acceptance of the term, but sometimes there is an error in diagnosis. I recall the case of a gentleman whose disease was diagnosed typhoid of an atypical type, and yet which on close examination proved to be an abscess of the liver. We cannot be too careful in diagnosing any atypical fever as continued fever, for after all close conscientious work at the bedside will prove that they are less frequently seen than the careless observer would suppose.

Diagnosis: So much for the causes of the atypical fevers seen in North Carolina. To us as active practitioners, the most important question except the treatment is the diagnosis. Every conscientious physician is frequently non-plussed by this question. He is undecided as to whether this case is typhoid or malarial, or a third form of fever neither typhoid nor malarial. So far as I am concerned, I have not seen enough of these fevers to convince me that they are anything else than either typhoid or malaria. Oxidation and the consequent diminution of the normal alkalinity of the blood, the idiosyncrasy of patient to the infection, the faultiness in the administration of quinine, and possibly, its inability to effect the crescent organism, together with the fault in diet, the effect of environment on the germ and its toxic manifestations as well as on patient, added to improved or changed sanitary conditions and the errors made in diagnosis can and do account for all of the atypical types of malarial or typhoid fevers seen in North Carolina. The elimination of the so-called third form of fever from the discussion narrows the question to a consideration of the differential diagnosis between the typhoid and malarial fevers of the atypical type. In an attack of atypical fever it is seldom that one can derive any benefit from a study of the outset. In either typhoid or malarial fever it may be slow or sudden. A close study of the temperature for four or five days assists us much should quinine be administered. By this time the temperature should be very

much modified in atypical malarial infections. The temperature in many cases of typhoid in Eastern North Carolina will rise quickly, run a high course for six or eight days, then suddenly drop, even if no quinine be given, one to three degrees, then running an uneven course though gradually diminishing until the normal is reached. In many cases, unless carefully considered, this sudden drop of the temperature on the sixth or eighth day will prove misleading, especially if quinine has been administered. In all cases of simple typhoid infection the temperature though often remittent is less distinctly so than in malaria. In many cases of typhoid fever seen in Eastern North Carolina distinct paroxysms can often be made out, thus resembling malarial fever. There is more bronchitis in typhoid than malaria fever, though it may be present or absent in either. Nose bleed is very rare in malaria, and when present, unless in one predisposed to it, it should be regarded with suspicion. It is a more important symptom of typhoid fever than generally admitted.

A study of the circulatory system is of little value in the diagnosis of either infection. The expression may or may not be dull and heavy, and the conjunctiva and cheeks may or may not be flushed in either. The tongue usually considered as indicating much in fever is of little value in Eastern Carolina except in certain cases. I have seen it coated, large and flabby, with teeth indentations in typhoid, and I have noticed the red-edged sharp-pointed typhoid tongue in malarial fever. There is a tremulousness about it which is often present in typhoid but seldom in malaria. Labial herpes is a strong indication of malaria. One important diagnostic sign is the early appearance of anæmia with an icteroid hue in malarial fever, while in typhoid fever the jaundice is not seen at all and the anemia not before the end of the second week. Severe gastric symptoms are sometimes present from the very beginning in typhoid fever of the Seaboard section, though it is not so constant as in malaria. This is probably due to the tendency to visceral congestion so universally present in malarial sections. Intestinal symptoms so marked in the mountain region are of some value to us in the East, though not of so very much importance. I have seen malarial fever with as pronounced abdominal tenderness and tympanites as are usually found in typhoid, and typhoid with as little abdominal symptoms as are generally present in malarial fever. Constipation is as frequently seen in typhoid fever of the East as in malaria. The typhoid eruption is of much diagnostic value,

and though very often but few spots can be found, yet I believe they are present more or less in all cases. I have not been able to derive much help from a study of the liver and spleen in these cases. Nervous symptoms are more pronounced in typhoid than in malarial infection. There is no doubt that the mosquito transmits malaria. In my opinion this is the only way in which man is infected. The accurate determination of the exposure or non-exposure of the patient to the ravages of this insect, especially the *Anopheles claviges* is a very important point in the differential diagnosis.

Stupor, subsultus tendinum, muttering delirium, sordes on the teeth, etc., when present, are generally due to errors in diet.

While a close study of the patient, the history of the case, the symptoms presented along the lines indicated above will enable the conscientious physician to arrive at a satisfactory diagnosis, yet in spite of all this he may find himself in the dark. There are three tests which if applied intelligently and considered collectively will make the diagnosis positive sooner or later.

With the chemical test I have had no experience. I have never been in doubt after trying the other two tests and have therefore never used it, but I see no reason why the diazo-reaction should not be of service in many instances. As to the therapeutic test (the administration of quinine) I have this to say, that while it is so often invaluable, yet we should not permit ourselves, if possible to avoid it, to needlessly drug our patients. If we must use quinine to determine the character of every case of fever may we not do much harm to our patients? I am sure that a case of so-called gastric fever would be much injured by it, and I feel quite confident that it brings about mischief in typhoid fever in many ways needless to mention here. I believe its diagnostic value is over-estimated. We usually say that should the temperature be markedly affected by it in three or four days that it indicates malaria. So it does very often, but sometimes not. For example: on the sixth day of her illness I was called to see little Miss M. She had typical typhoid fever. On the eighth day of her illness her temperature dropped two degrees and then ran the usual course. No quinine was given. Suppose I had administered large doses of the alkaloid the two days previous using this test alone, I would have declared at once that I was dealing with malaria.

If a careful daily record of the temperature of typhoid fever seen in Eastern Carolina be kept, very many similar cases would

be found. Again, suppose we have a low remittent malarial infection engrafted upon a subject whose excretory organs were functioning much below normal, so low as to be barely able to throw off the poisons naturally produced by the economy, should we not expect to find the fever actually continued if not increased by quinine? I think so. This alkaloid throws extra work on these already over-burdened organs, and makes it practically impossible for them to rid the system of the toxins produced by the disease. So that in a case like this we would say that it was typhoid should we depend upon the therapeutic test alone. There is no doubt that quinine is one of the most badly abused of all drugs; and its indiscriminate use in therapeutic diagnosis should be severely condemned.

A careful microscopic examination of the blood will demonstrate practically to a certainty the presence or absence of malarial organisms. Just here let me say that sometimes the administration of a large dose of ergot two or three hours before the examination will bring out an otherwise hidden organism. If the malarial plasmodii are found we should then satisfy ourselves that there is not also a typhoid infection. To do this we have a test which in careful hands will prove a most valuable one, and that is the Widal reaction. I shall not discuss it here. I believe it to be thoroughly reliable when properly done. This much I will say, that the stock cultures should be transferred from agar to agar every three or four days and kept at room temperature. This test should be made with bouillon culture from 10 to 18 hours old at normal temperature, and the serum mixed in the proportion of 1-40 with one hr. time limit. This in my experience has proven itself to be the best method. There are several objections to this test, however, from a diagnostic point of view, chief among these being the lateness in the course of the disease when it is demonstrable, and the fact that one must be more or less of an expert in its application. This last objection can be urged against the microscopical test for malaria with equal force.

Sometimes we see in North Carolina a fever which has a tendency to be continued which does not show the malarial organisms and does not respond positively to the Widal reaction. Those cases which I have seen were no doubt due to intestinal bacterial infection. I do not consider this fever as a continued fever, hence shall not discuss it. This type of fever is of much importance, however, and this much should be noted when discussing continued fevers, that the lack of proper medical attention

will sometimes permit it to run a longer course than it should. For instance, if the stomach be very irritable, as it often is in these fevers, the persistent use of quinia with the idea that it is malaria, and a refusal on the part of the physician to administer a purgative, fearing if it should be typhoid that it might produce an uncontrollable diarrhea, (and I have seen a physician manifest such a ridiculous fear) this fever will last much longer than usual, and will be of a continued nature.

As to the continued fevers of North Carolina I have nothing especially to offer. The proper management of the case after the diagnosis has been made is an important and serious question. The course outlined in any up-to-date text-book for the typical cases of malarial or typhoid fevers apply with equal force to these atypical forms which we have been discussing.

My own experience, and my observation of the practice of others, have taught me that probably the three most important things for North Carolina doctors to guard against in the treatment of these as well as other fevers are: first, the reckless use of quinine; second, the over-dosing of typhoid fever patients, and third, the lack of thoroughness in reference to the diet.

Abortion.*

By E. T. Dickinson, B. S., M. D., Smithfield, N. C.

This paper shall be an effort at brevity embodying points not beyond discussion, and yet the properly recognized and well-tried teachings and methods which should be remembered in the management of every case of abortion coming under our professional observation.

Expulsion of the ovum before the period of viability will be understood as abortion; that occurring after the child is viable to within a few weeks before the normal termination of pregnancy as premature labor. The period of abortion extends to the twenty-eighth week of pregnancy, and on account of improved incubation is growing shorter. Premature labor includes the period of the twenty-eighth to the thirty-eighth week of gestation, and for the same reason is growing correspondingly longer.

Abortion is of frequent occurrence and serious nature; frequent to the extent of at least once in every motherhood. Judging from Whitehead's statement that thirty-seven out of every one hundred mothers

abort before they reach the age of thirty, serious to the extent approaching consumption in that sex, when considered as the starting point, when neglected, of various diseases of the uterus, as sub-involution, chronic metritis and endometritis leading to invalidism as well as the numerous deaths by sepsis and pelvic peritonitis.

The causes of abortion are inconceivably infinite, may appear infinitely small, obscure and inevitable, or infinitely gross, bold and despicable. They may be grouped into paternal, maternal, ovular, therapeutic and criminal. The last two are induced abortion. It occurs most frequently between the ninth and sixteenth weeks of pregnancy, and at the time corresponding to the natural monthly period. It should ever be remembered that in most cases the diagnosis is a simple affair, but the practitioner will meet with no condition which at times will puzzle him to the same degree to answer these questions:

1. Has the woman been pregnant?
2. Has she aborted?
3. Is the abortion complete or incomplete?
4. Is it criminal?

These must be decided before intelligent prognosis and treatment can be decided upon.

If the woman is found pregnant and abortion threatens, it is very important to know whether or not it is unavoidable, as the anodyne treatment of merely threatened abortion renders the inevitable type the more slow, incomplete and complicated. If there has been not much hemorrhage nor continuous uterine contraction it is safe to consider the abortion as merely threatening. The patient must be put at once at complete rest and placed as soon as possible under the influence of drugs that will diminish nervous sensibility and weaken muscular action, the anodyne method; opium in the form of suppository being perhaps best and is more generally used in this country. If the abortion can be prevented the uterine contraction will soon cease, the bleeding stopped and the patient usually will drop to sleep.

If this result should not follow the treatment within a few hours, hope of delaying abortion should be abandoned and measures should be taken to secure complete and early expulsion of the ovum. Two dangers threaten the mother, hemorrhage and septic infection. These dangers are best guarded against and at the same time complete expulsion of the ovum secured by the proper use of the antiseptic tampon. After several hours when the tampon is removed, and if necessary renewed, the ovum will often be found adhering to it. Adminis-

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tration of ergot will aid in the early completion of the process of expulsion. If the abortion is surely complete, the after treatment will be simple and period of recovery uneventful. If it is found incomplete, as will most often be in the early months of gestation, the large mass of the deciduous membrane being almost certainly retained in the uterine cavity, and later the placenta being frequently left behind, the treatment will not be so simple and prognosis so satisfactory. Here it is that there is so much difference of opinion as to the proper course to pursue—whether the conservative or the active course of removing at once the substances in the uterus which may give rise to future complications. The proper course, undoubtedly, is the one corresponding to the inclination of the physician in charge. If we were all accustomed to the proper use of the curette, the future safety of the woman in every case would demand that the secundines be at once removed after the expulsion of the fœtus in every case in which such removals can be made without force sufficient to injure the woman. But it must be remembered that in the hands of general practitioners, unaccustomed to gynecological maneuvers and aseptic measures the curette in the puerperal uterus will often prove a dangerous instrument. If this active treatment be adopted the after care will be very simple, for the lochial discharge will be very slight and involution of the uterus rapid. But whatever course we pursue until this latter condition is perfected, the woman should be confined to bed.

If it be found that the case is one of that class in which the physician himself, for the safety of the mother, finds it necessary to bring about the premature discharge of the contents of the pregnant uterus, to demonstrate absolutely the absence of criminal intent should be his first thought. It is of some importance to know whether we are dealing with a viable or a nonviable child in order that the proper method be employed. If the twenty-eighth week is approaching and it is possible to wait until the period of possible viability of the child arrives, such should be done; and this done, the induction should be postponed as long into the viable period as it is reasonable to venture, and thus compromise between the interests of mother and child, but always giving the mother the advantage of any doubt.

In bringing about the expulsion of the fœtus by artificial methods we should, as nearly as possible, imitate nature, by securing clonic contractions of the uterus and the consequent evacuation of that organ. The process is a reflex act induced by the

application of a stimulus, the impulse of which is sent along the peripheral nerves and causes the uterus to contract. This reflex act may be brought about in various ways, but many are unreliable while others are complicated and unsafe. The reputation of emmenagogues in unsafe doses is largely based on erroneous diagnosis. The use of all drugs for this purpose is unscientific, unreliable, unsafe and, indeed, superfluous, as if the woman is pregnant, she will lose her life before the child is destroyed; if she is not pregnant, they are unnecessary. Only the ignorant laity use them. The most reliable, safest and most generally employed method is that adopted by Sir James Simpson of introducing, under aseptic precautions, a soft rubber bougie into the uterus and retaining it there by a vaginal tampon until uterine contraction are excited sufficient to expel the ovum. The dangers are sepsis, inflammation and hemorrhage. The first two must be avoided by observing strict asepsis of the external genitals and vagina and of the hands of the operator. Should there be much hemorrhage, the placental site has probably been invaded and the bougie should be withdrawn and reinserted in another direction. If after this the hemorrhage becomes alarming a firm vaginal tampon may be placed. This method after the first few months of gestation usually acts promptly and efficiently. If, however, the abortion is to be induced in the first eight or twelve weeks of pregnancy, cervical dilatation and thorough aseptic curettment is to be preferred.

If the abortion be found criminal the indications are to guard against sepsis and hemorrhage. It is imperative for the woman's future usefulness and well-being that all cases be kept quiet in bed until complete involution of the uterus is certain. In the interest of the profession and the common community as well, when even slight suspicion of criminal interference exists, the physician should exercise great care in examining his patient and make complete notes of any history he may obtain from the patient and others present, and also keep complete notes of his physical examination, and the clots and portions of the embryo should be kept for inspection. If there is positive evidence of criminal abortion produced by a second party the case should at once be reported to the proper authorities and all evidence possible should be placed at their disposal. In this way much can be done toward the prevention of criminal abortion.

A recent question, worthy of serious discussion, arises when a woman has committed abortion upon herself. Morally it seems

right that the physician should report the case in the capacity of a citizen. But, professionally it would be the part of reasonable policy if not morally right, to save life if possible and to keep the offender secret, this as much in the interest of future unfortunates as for the solution of the present dilemma; and, too, it seems the surest means of discouraging the development of an increase in number of professional abortionists, who have neither the interest of the future community at heart nor the safety of the woman.

As to the propriety and demand for larger liberty in the induction of abortion in unfortunate young unmarried women the time has probably not arrived for its discussion, but it has been urged that there should be a recognized difference between abortion for convenience in the married and in an unfortunate single woman, whose shame would be agonizing to herself, her kinsmen and the branded child she bore. One plainly feels the need of this difference after turning away one of these unfortunates. But while each of us with a heart, with a sense of justice, and with an active and right conscience keenly feels the need of this legal difference under similar circumstances, we must not persuade ourselves nor allow ourselves to be over-persuaded that induction of abortion, except for the life of the woman, is and must always be highly criminal against both morality and the most conservative law, and we must look for relief only in the establishment of some institution for the protection of both mother and offspring, and thus to allow them both the greatest opportunity of becoming useful citizens of the community.

Chronic Endometritis, Its Varieties, Pathology and Symptoms, with Special Reference to Treatment.*

By B. Ray Browning, M.D., Littleton, N. C.

I desire to express my appreciation of the honor conferred upon me as Chairman of the Section on Gynecology to prepare a paper for your consideration at this meeting. In the selection of my subject I have not had in view the presentation of anything new or startling, but shall content myself in the short time at my disposal to touch upon some of the essential and interesting features of the subject chosen. Endometritis is an inflammation of the lining of the uterus. It is a disease of men-

strual life, and while I have not observed it before puberty, yet it exists according to good authority, constituting the virginal form; it also extends beyond the menopause in the well-known form of Senile Endometritis. I shall content myself, however, with considering those varieties occurring during the child-bearing period. There are two distinct varieties of endometritis, viz: (a) Glandular, and (b) Interstitial, with probably a third or uncertain variety, the fungoid or villous form. There is also a variety of endometritis occurring in the puerperal state, which, while it does not come distinctly within the scope of this paper, will be touched upon at a later period.

Without necessarily admitting the broad statement that all inflammatory processes are due to microbes as taught by Senn, Roy and other surgical writers, it may be claimed that the position is strengthened by the investigations made to determine the pathogenesis of endometritis. It is a well established fact that in the healthy uterine cavity there are no microbes. Winter has proven this by examinations of a large number of uteri removed from the body.

Strauss and Doderlein have found the lochia in non-febrile puerperal cases free from bacteria. It is a singular, though wonderful fact, that the uterine cavity should remain free from germs when it has been clearly shown by Winter and many others, that in all, or nearly all women, the vaginal and cervical canal contain large numbers of microbes. The absence of uterine secretion, as suggested by some, may have some bearing upon this subject. It is quite important to remember that the microbes found in the vagina and cervix have usually lost most of their virulence. This is true of both the staphylococcus and streptococcus. The unbroken epithelial membrane of the endometrium is probably in no danger from them after they have undergone the change produced by a residence in the vaginal and cervix canals, and the menstrual decidua, instead of forming a nidus, is also toxic to them. All cases of endometritis post-partum, or post-abortum, are probably of microbic origin. Endometritis originating in other conditions, as from the introduction of sounds and tents, specific vaginitis, etc., is probably due to the same cause.

Bacteriological investigations during the last few years tends to confirm this. The recent report of Brandt, working in Slavjanskys clinic, who examined 25 cases of chronic endometritis, and found bacteria in 22, streptococci were present in 2 cases; staphylococci in 7; gonococci in 3, and non-pathogenic bacteria in the other ten. Pos-

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itive information as to the tissues inhabited by the bacteria, their mode of growth and the way in which they produce their pathological effects in chronic endometritis, has not yet been obtained. It is probable that the connective tissue spaces of the stroma are the chief habitat of the germs in all cases; their presence in the epithelial cells, on the surface of the mucous membrane and in the glands is not doubted. The epithelial layer, although consisting of only a single row of cells, is a protection to the underlying stroma. Brandt believes that the different forms of endometritis are caused by the different bacteria located in the different habitats. Thus, in catarrhal endometritis, endometritis interstitialis, he finds short thick bacilli in the hemorrhagic extravasations. In septic endometritis, endometritis decidualis acuta, the dilated glands are filled with cocci, while in gonorrheal endometritis, the gonococci are in the epithelial cells. The microscopical examinations of different parts of the endometrium shows different results, not due to different diseases, but different stages of the same disease. With the acute variety of endometritis we have here little or nothing to do because it is so manifestly against the best interests of these cases to curette the uterus that laboratory studies have not extended in this direction. Suffice it to say that acute endometritis is characterized in the same way as any acute inflammation of other parts, by the presence of an inflammatory exudate. According to Keogh the inflammatory exudates consists of polymorpho-nuclear leucocytes, fibrin and serum accompanied with increased secretion of mucus. Red blood cells, escaped by diapedesis may be present, but the presence of the leucocytes being our chief guide in diagnosis. In the first stage of chronic endometritis there is an increase in the size of the glands, later there is also added an increase in their number. They branch out laterally, cork-screw shaped, and if this hypertrophy and development of glands are carried to an extreme, we often find the whole mucous membrane consisting almost entirely of functioning glands with little interstitial tissue. Added to this there is hypertrophy of the glandular epithelium, as many as three layers lining the gland. Hemorrhages into the gland are also found. In the interior of the glands mucus is often found and there is almost constant swelling of the endothelial cells of the capillaries with dilatation of the veins. This is the glandular or hypertrophic, the first stage of chronic endometritis, the so-called endometritis glandularis of Ruge and Veit. Between this picture and that of the ex-

trême interstitial stage there are many intermediate steps. The transition is a gradual one requiring perhaps years for its completion. According to Weiner and Veit, the microscopical examination of uterine scrapings often show a granular process side by side with an interstitial process. In this latter process the cells encroach more and more upon the glandular epithelium, even into the lumen of the gland, causing atrophy. The lumen of the gland becomes filled with connective tissue which in turn becomes irregular, shrinks and breaks down. Hemorrhages may now take place, but necessarily are circumscribed. According to Schroeder, the mucous membrane as such is entirely destroyed, the glands disappear and the stroma cells resemble decidual cells. In the specific form the glands are not increased in number, though most of them are dilated, the epithelium being found in several layers. Considerable interstitial hæmorrhage has been found, the capillaries dilated and increased in number. Wyder has pointed out that all attempts to demonstrate the gonococci these old cases prove futile. The stroma cells are often swollen and proliferated while the glands are dilated and irregular in shape, their lining epithelium desquamated. The so-called fungous or papillary form of chronic endometritis is characterized by irregular papillary or villous outgrowths upon the surface of the endometrium.

In regard to septic or puerperal endometritis, there are two varieties, according to Bumm, of Wurtzburg, and these he claims are demonstrated by both microscopical, bacteriological examination and clinical experience, the putrid and septic, either of which he claims may occur in a pure form. Septic endometritis is marked by the presence and development of septic germs upon the decidua. While streptococci are more frequently found, other varieties of bacteria may be present. In the putrid form, change in the decidua, according to Peterson, are produced by streptococcicmicroorganisms, but no development of septic germs occur. The resulting decomposition gives rise to fever and other symptoms of intoxication. A very interesting fact histologically, in connection with these cases, is that there is found beyond the necrosed decidua a zone of cellular infiltration which is a result of the re-action of the organisms and acts as a barrier to the entrance of germs. The reason why one affection is local and another general can only be explained by the virulence of the septic germs present. Chronic catarrhal inflammation of the lining membrane of the uterine cavity in the married woman is a well

known disease and has been described in text books for years as a cause of sterility, and the result of certain injuries incurred during parturition, or of pathological conditions following that originally physiological function. The causes of endometritis in the married nullipara are usually insidious and slow in their action, like catarrhal affections of other mucous membranes. Repeated exposures to cold, a general catarrhal tendency, prolonged and frequently recurring pelvic congestions, such as is produced by excessive sexual intercourse, especially if means for the prevention of conception are employed, these are factors combined with general anæmia which most commonly bring on a chronic endometritis. To these are added natural feeble constitution, scrofula and tuberculosis symptoms.

The first and most prominent is leucorrhœa, the discharge being of a thick viscid consistency, like boiled starch. The leucorrhœa discharge is opaque, when mucus crops abound, and yellowish when pus crops abound. The cervix is only slightly sensitive and hence the disease may not be noticed by the patient for some time. Pain is more or less present in the back, groins and down the thigh and during coitus. It is most severe on left side and under the mammæ, neuralgic pains which lead to the supposition of liver disease. Menstruation may be normal, but is often increased in amount. Digestion is deranged, the nerve centers become unbalanced and the woman soon appears like an invalid. The sensitive and extensive nerve periphery which ends in the uterus is irritated and inflamed. Nerve reflexes induce excessive, deficient or especially disproportionate secretions and indigestion or diarrhœa follow. This is especially true of the glandular form, which at times of menstruation is very exhausting to the patient, from the increased discharges, blood and mucus. The interstitial variety of this disease is very prone to produce sterility, and early in its course dysmenorrhœa, with exfoliation of membrane and later cessation of menstruation. This variety, according to Robinson, soon induces metritis, in which active deposits of connective tissue are the essential process and hence results in a small, hard, stiff uterus capable of no function. There is often nausea, vomiting and flatulent distention of abdomen leading to pseudo-cyesis. Dark circles are seen around the eyes, headache, despondency and hysteria, the patient frequently crying at sight. There is inability of patient to concentrate the mind upon any one subject. These are some of the disorders of the nervous system. The existing sterility is often the only symptom which

prompts the patient to consult a physician. The use of the sound in the uterus causes pain and a slight amount of blood escapes, hence after our diagnosis the sound should be used as little as possible. In cases of long standing the mucous membrane becomes atrophied and the uterine cavity becomes lined with connective tissue. Hemorrhage is a very prominent symptom and uterine colic may come on from time to time. While leucorrhœa is a very prominent symptom in the glandular form, in the interstitial variety it may be observed at first from slight irritation, but it soon diminishes and may finally cease altogether. The painful menstruation is due chiefly to the compression of the nerves by the distended vessels. The sterility is occasioned by the spermatozoa being killed by contact with the acrid discharge or the sensitiveness of the uterine mucosa causes an early expulsion of the fecundated ovum. In multipara with small os, the mucus plug may impede their entrance, though pregnancy may result.

The villous or fungoid form of endometritis is not a very frequent condition, according to Munde and Robinson. Its chief symptom is hemorrhage. It bleeds at any and all times. Usually the vessels of the endometrium are enormously dilated, and the endometrium is so vascular that it resembles a fungoid growth.

Physical Signs.—Inspection at times reveals merely a red ring and the os externum soft and tender. At times the os is wide enough to admit the finger. In multipara lacerations often exist, notches and punctured cicatrices, obstructed nabothian follicles often appear, and discharge presenting little nodules to the finger is seen through the speculum issuing from os-tincæ. As a rule there is little tendency to spontaneous recovery as displacements often follow. A guarded prognosis should therefore be given according to extent of tissue involved.

Treatment.—This must be both constitutional and local. At times this affection is but a local manifestation of a general disease. The general health of patient must be looked after, the secretions and excretions. She must have and keep regular hours, have good, wholesome and nutritious food, pleasant company, exercise in the open air, warm baths, bowels regulated, trip to sea and in fact everything that will promote her health. Ferruginous tonics when indicated.

Local Treatment.—To be efficient this must be thorough. The first course to pursue in preparing a patient for local treatment is absolute cleanliness. This is best

secured by hot vaginal douches. Burbenshaw says that of all therapeutic measures that are brought to bear in the treatment of female pelvic diseases, there is probably no single one that is so abused and the underlying principle of which are so little understood as that of hot water vaginal injections. Therefore they serve us a double purpose in the preparation of our patient for local treatment. Rationally and intelligently employed, it is one of the most remedial measures at our command; ignorantly used, it is often fraught with danger, and defeats every object in view. Plied with questions as to the technique of using hot water vaginal injections most women will give correct answers except as to amount used, they seldom using more than a quart; one will confess that she has used a very much larger quantity, but has squatted over the douche pan instead of lying flat on her back when taking the injection; another has laid down, used a gallon or more at only a moderate temperature, and thus it goes. The intention has been of the best, the practice the worst. Certain rules should be printed for distribution by physicians among their patients requiring vaginal injections, but it is a notorious fact that many will tell you the trouble attendant thereon is too great.

1. A large sized fountain syringe should be used, preferably one holding four quarts, attached to a support three or four feet above the body.

2. The patient should lie on her back, with hips elevated and shoulders depressed.

3. At least two to three gallons of hot water should be used, the temperature of which should be from 110 degrees to 120 degrees F.

4. The injections should be taken twice a day except on two days preceding and two following the menstrual flow.

The reason for assuming a strictly dorsal position with elevation of hips is sufficiently obvious, the hot water should bathe the parts thoroughly and constantly, a thing not easily accomplished in the upright position. Why should three gallons of water be used? For a very simple reason, and herein lies the secret of success. Wherever in the body there is an inflammatory process—an irritation—an increased amount of blood will be drawn to the parts, and wherever there is hyperæmia, there will be hyperplasia, if the process remains unchecked. The exceptionally free blood supply of the pelvic organs render them peculiarly liable to this evolution. The initial effect upon the tissues of water at a temperature of 110 deg. to 120 deg. F., is to dilate the blood vessels and thus to temporarily in-

crease the already existing congestions; the secondary effect is to cause contraction and consequent lessening of congestion. It is this very effect that we wish to bring about in the treatment of pelvic inflammatory conditions by the use of hot vaginal injections, and hence it is not only an agent of cleansing, but of distinct therapeutic property.

This line of treatment must be continued for some time. We sometimes meet patients upon whom these douches have an exceedingly debilitating effect. Then the temperature or amount of water must be reduced. After taking these hot vaginal douches, the patient should rest quietly for an hour or two, shielded from draughts. Reclus, of Paris, claims, and with apparent good reason, that the use of hot water enemata in pelvic inflammation is much to be preferred to vaginal douches. He directs that the water be used at a temperature from 120 to 130 deg. F., and that the patient must retain a large quantity for some minutes. Some little practice is necessary to accustom the patient to these enemata, the tendency to tenesmus being difficult to overcome.

We have now to consider the use of the curette in chronic endometritis as the next step in the local treatment. In considering the use of the curette in this disease, it is not proposed to consider separately the different clinical varieties of endometritis, as all varieties of this disease, whether developing through the agency of pathogenic bacteria or due to circulatory disturbances of non-infectious origin, are more or less amenable to treatment by the curette. The object of the curettage is the removal of the diseased endometrium. The utricular glands being increased in size or number the amputation of them at the muscularis secures better drainage. In the infectious cases the curettage places the uterus in a condition where the bacteria can be destroyed by the active leucocytosis produced by the operation. Martin, Thomas, Pozzi and others advocate the use of the dull curette, while Peterson and Bacon say that only by the use of the sharp curette can the complete removal of the glands down to the muscularis be accomplished. It is interesting to note the amount of actual tissue removed by ordinary curetting and the subsequent regenerative changes. Werth and Bossi found the amount to be very unequal, some parts being altogether untouched, the fundus and angles remaining intact. Bossi found the uterine mucosa in two cases completely regenerated in 25 to 27 days. The best results seem to follow the use of the small sized instruments which can be more easily inserted into the cornua of the uterus

and between the rugæ. Regeneration of the epithelium is delayed after the application of liquor ferri.

"These observations," says Peterson, "are especially valuable in connection with the treatment of gonorrheal endometritis, which has long been recognized as one of the most difficult to cure of all uterine diseases."

This is supposed to be due to the deep penetration of the gonococci, they having been found by Madelener in uterine muscular tissue and hence beyond the reach of the curette. Indeed, Neisser himself says that once the infection has gained a foothold in the uterine mucosa there is scarcely any medical treatment of any service. Drainage seems to be all important in securing good results after curettage. Johnson says that in order to secure good drainage after amputation of the utricular glands, caustic applications must be omitted, as they tend to cap over and shut in the contents of the glands. This, however, does not coincide with Robinson who says he relies more on the acid and cautery than in the curette, though this last author, speaking of the glandular form of endometritis, recommends the use of the sharp steel curette after which an application of 95 per cent. carbolic acid is made to destroy the old adenoid endometrium. The application of the Pacquelin cautery is recommended as affording a fair chance of recovery. To be of service, the endometrium must be destroyed for a goodly distance. Some writers recommend the packing of gauze within the uterine cavity subsequent to curettage, but the opinion is that it does not act as an efficient intra-uterine drain, especially in septic endometrial diseases. The method employed by Gill Wylie is to dilate, thoroughly curette the uterus and apply tincture Iodine or pure carbolic acid to the entire endometrium and put in a hard rubber stem. This latter keeps the cervix open and acts as a drain. "In the septic form of puerperal endometritis, marked by the presence and predominating influence of streptococci and other pathogenic bacteria," says Peterson, "it is only where the disease is localized that it is amenable to treatment by the curette, and the sharp curette is especially to be deprecated. Bumm, of Wurzburg, in a paper read before the German Gynecological Society expresses the belief that only in the early beginning of the infection could anything be expected from the disinfection of the endometrium, and where virulent infection has taken place generally the curetting is usually too late.

Williams, Prior, Fry and Reynolds, (Therapeutic Gazette, February, 1900),

working together, report as follows concerning the value of anti-streptococcic serum: "A study of the literature of the subject shows that 352 cases of puerperal infection have been treated by many observers with a mortality of 20.74 per cent. When the streptococci were positively demonstrated the mortality was 33 per cent." They show that without treatment such cases present a mortality of about 5 per cent., and that such cases tend to recover if nature's work is not undone by too energetic local treatment. They unhesitatingly condemn curettage and vaginal hysterectomy. Their experience is that antistreptococcic serum is not injurious and may be tried if desired, but that its employment does not materially improve the general results of streptococcus puerperal infection. Where several methods are employed, as is usually done, it is difficult to say to which therapeutic measure the success is due. It is highly important first of all to ascertain the nature of the infection before injecting so potent a remedy.

Noble, of Philadelphia, strongly advocates the local application of alcohol to the endometrium in cases of acute infection confined to the uterine cavity. This is done by means of a sterile rubber catheter and sterile gauze, a few drams of 95 per cent. alcohol being injected every half hour until improvement takes place. A number of cases so treated responded very promptly and in all recovery ensued.

To those who believe that Endometritis is a disease of microbic origin, the antiseptic treatment will appeal with peculiar force and has strong followers. Of these Bacon is an able exponent. He advocates dilatation, antiseptic irrigation and drainage. When one considers the great difficulty in disinfecting the hands, so forcibly shown by Kelly of John Hopkins, he can imagine the uncertainty of rendering the surface of the less accessible membrane of vagine and cervix aseptic. In order to do this, therefore, and to prepare the way for the successful employment of the curette and antiseptics to the diseased mucosa, it is necessary to observe certain rules in the introduction of the curette, sound or any other instrument into the uterus, least we unwittingly carry pathogenic bacteria within the cavity. Patients should be instructed to take sublimate douches in the manner already outlined, twice a day, for several days prior to an examination, which should never be made during the first visit. The external genitals and surrounding skin should be thoroughly cleansed and disinfected. This can be done by washing them with a solution of lysol or creolin and

thoroughly scrubbing with a liquid soap. The cervical canal is to be treated in like manner in order to disinfect it and lastly an application of 95 per cent. alcohol is made to the entire surfaces thus treated. It goes without saying that no instrument should be introduced without seeing the open canal. "The curette," says Bacon, "is only a part of the treatment, for no one claims that by it alone can we render the uterine cavity aseptic. It simply prepares the way for the antiseptic treatment. In this respect it differs from the caustic which has both a denuding and germicidal action." The success in the use of the antiseptic depends upon the ability to bring the agent into direct contact with the pathogenic germs. By removing the endometrium with the curette, or with caustics, one is enabled to apply antiseptics direct to them. When the curette is used carefully, and thoroughly followed by an efficient germicide I believe it is a more reasonable surgical procedure than the caustic. The outer portion of the endometrium, it is advised, should first be removed by the curette and the antiseptics applied in solution by the syringe or by means of an applicator or in solid form. Massage of the uterine cavity by means of an ordinary applicator swab under antiseptic precautions, is said to stimulate the resisting and bacteriocidal properties of the tissues. Any measure which will improve the circulation, control the distended capillaries and arteries, empty the lymph channels and remove the exudations will also stimulate the antiseptic properties of nature. These agents, or measures, we apply to the diseased mucosa in the shape of slight stimulants as Iodine, Massage, Electricity, etc. Indeed Schultz says that mild astringents or stimulants like weak zinc chloride or Iodine solution are often harmful because they serve as carriers of contagion, but when used with antiseptic precaution they may in suitable cases be of considerable benefit. By massage is not meant the Thure Brandt method, but stimulation of the cellular elements by mechanical irritation.

Electricity is another agents which must be considered an auxiliary of nature in the treatment of endometritis. Of the use of this agent I cannot speak from personal experience. There are those, however, in whose hands it has produced marvelous results. It is said to be especially serviceable in those cases following abortion. A current of sufficient strength to have germicidal properties, is, I believe, too strong to be used in the uterine cavity. By virtue of its well known effect upon circulation, the galvanic current is said to be a valuable

agent in controlling the hæmorrhage in cases of hæmorrhagic endometritis. As an adjunct to the treatment already outlined I should mention the use of tampons of boro-glyceride. These tampons are pushed well back against the cervix and left insitu for 18 to 24 hours after which they are removed and a hot vaginal injection is given to which is added equal parts of powdered alum and borax. These tampons act by virtue of capillary attraction depleting the tissues to a marked extent. In those cases of endometritis accompanied by subinvolution, where the whole organ is large and heavy, these tampons have a very beneficial effect. If you have your patient under control the treatment of this condition is most favorable, otherwise very unsatisfactory. You will probably find no one method of treatment to be specific—neither the curette nor the caustic. There is good in all methods which meet the chief indication, which is the removal of the disease. It is by combined internal and local medication carried out along antiseptic lines, upon which our success will. You must study your patient as well as her disease.

An Unusual Case of Appendicitis.*

By M. P. Perry, M.D., Macon, N. C.

In reporting this case it is not my purpose to attempt to add anything medical or surgical to the treatment of appendicitis, but simply present it as an anatomical curiosity. In June 1899 I was called to see Miss D., age 15 years. I found her suffering from severe pain in left iliac region at a point lower than McBurney's point on oppsite side. There was marked tenderness at this point but no evidence of tumor. Her temperature ranged from 102 to 103. There was some nausea with occasional vomiting. After a day or two there was slight pain on pressure at same point on opposite side. I gave anodynes to relieve pain, and salines until bowels were thoroughly evacuated, hot water bags were applied, hot vaginal douches and other symptomatic treatment as the case demanded. The pain and fever continued for a week, when she began to menstruate and all unfavorable symptoms abated and the patient regained her usual health. My diagnosis at this time was salpingitis. About a month later she had a similar attack but not so severe, which passed off with a menstruation.

No physician attended her during this

*Read before the North Carolina Medical Society. at Tarboro, N. C., May, 1900.

attack. With her subsequent menstruation she had no trouble. I did not see her again professionally until November, when I obtained the following history: That while playing at school she had a fall, which caused a very sharp pain for a while in left side. After the acuteness of the pain subsided, she still continued to feel uncomfortable, this condition remained unchanged for about four days, when she had an attack resembling colic, bowels moved three or four times freely. This was Friday morning. I saw her in the afternoon I found her suffering with the same train of symptoms that characterized the first attack. I treated her as before, giving her saline purgatives repeatedly the next day, (Saturday) but could get no action from the bowels. So gave injections with rectal tube with negative result. The vomiting became incessant, nothing could be retained by the stomach.

Sunday morning she began to develop symptoms of peritonitis, and abdomen became swollen, the tenderness more general, and the temperature dropped to normal. At this time I called my friend Dr. A. S. Pendleton, of Warrenton, N. C. in consultation. He agreed with me in the opinion that nothing but an early operation could save my patient. I took her to Richmond by an early train Monday morning. She was taken at once to Dr. McGuire's Hospital and prepared for operation. At about three o'clock P. M. she was placed on the table. The operation was neatly and quickly done by Drs. Hunter and Stuart McGuire, disclosing the following condition: The whole peritoneal cavity was filled with offensive pus, the appendix was found in a sloughing condition, imbedded low down on the left side, and it was with difficulty released from its malposition and brought up through the wound of incision, the omentum had sloughed about two inches, the bowels were in a semigangrenous condition, the tubes and ovaries were normal. Patient reacted from the operation but succumbed six hours later.

Pylorotomy for Adeno Carcinoma, with Report of a Case.*

By Dr. Jos. H. Branham, M.D., Professor
of Surgery and Abdominal Surgery
Md. Medical College.

J. R., white male came under my charge about September 1st, 1899.

*Read before the North Carolina Medical Society, at
Tarboro, N. C., May, 1900.

His family history was good, no cases of malignant disease being noted. His general health had been good until about 18 months before, when he had a severe attack of malaria. This was followed by recurrent gastric attacks characterized by cramps and vomiting, the vomit containing bile. During this time he had to be careful as to food, coarse articles causing distress and a sense of distention in the upper region of the abdomen.

EXAMINATION.

Patient tall and spare, skin sallow and muddy, pulse weak and rapid on exertion. Mucous membranes pale.

Physical examination of abdomen shows thin walls, tenderness over region of stomach, which organ was slightly dilated, and the spleen was much enlarged.

Under large doses of quinia the splenic enlargement rapidly disappeared, but the gastric symptoms grew worse.

Gastric lavage gave little relief.

September 26th, he was admitted to the National Temperance Hospital and shortly afterward Prof. C. Urban Smith was able to make out a small mass at the right of the median line above the umbilicus.

This could only be felt when the patient sat with his legs well apart and stooped well forward.

The following notes by Prof. Smith elucidate the points of diagnosis.

Contents of stomach	Acid.
Acid Hydrochloric	.09%
Acid Lactic	Free.
Acid Butric	Free.

Pepsin and rennet normal, contained excess of mucus, yeast cells and a few cells resembling cancer. Salol test showed good motor functions.

Kali iodide test showed delayed absorption. Indican in urine.

Diagnosis, cancer of pylorus.

Preparation for operation.

Patient was put on a strictly liquid diet and for two days was given three grains of salol and 1-30 gr. of nitrate of strychnia three times per day.

The night before he was given a purge immediately before taking the anæsthetic his stomach was carefully washed out with sterile salt solution.

The usual preparations of the parts to secure surgical cleanliness were made.

OPERATION—Oct. 12th.

A median incision about four inches in length enabled us to examine the organs in situ. The pylorus was slightly lower than normal and was freely movable. A small growth about two inches in length and an inch broad was found occupying the an-

terior and inferior aspect of the pylorus encroaching on the duodenum. The length corresponding to the circumference of the gut.

This growth extended about two thirds around the organ, and was firm but not hard. No other abnormality was found in the neighboring parts.

The attachment of the omentum to this part of the organ was tied off and severed. The diseased part was now drawn well forward into the abdominal wound and surrounded by sterile gauze sponges. The attachments divided and the duodenum severed about an inch below the neoplasm and the stomach the same distance above.

An end to end anastomosis was next made by means of a Murphy button which was reinforced by peritoneal sutures. The abdominal wound was closed after carefully cleansing the parts with salt solution, part of which was left in the peritoneal cavity. All the sutures used were cat gut hardened in a solution of bichloride of mercury in alcohol one part to a thousand.

The patient was very weak and had several subcutaneous infusions of salt solution during the first twenty-four hours after the operation. He was also given about 1-10 grain of strychnia nitrate during and after the operation. He rallied slowly. For the first five days he had nothing by the stomach and was nourished entirely by the rectum. On the 14th, he had his highest temperature 101 deg. He was allowed to wash his mouth with cold water.

On the 17th, he was given small quantities of albumen and panpeptone. This collected in his stomach and caused great distress and was washed out on the 19th, by the stomach tube. This gave great relief and was continued about every second day for two weeks. Most of the food taken apparently remained in the stomach, the rectal feeding was continued during this period. On the 29th., seventeen days after the operation, the Murphy button was removed from his rectum by the resident physician. He gradually became able to digest food and gain strength slowly.

His temperature was nearly always subnormal, both before and after the operation; this I attributed to the bad nutrition due to insufficient assimilation.

He left the hospital, Nov. 20th. and returned to his home in N. C., weighing at this time, 84 lbs. He reported by letter from time to time to me and gradually gained strength and weight until April 1900, he had reached the very respectable figure of 147 pounds.

PATHOLOGICAL REPORT.

PROF. R. L. MC MUR,—"The growth is a carcinoma. Showing at points sufficient glandular arrangement to justify the name Adeno Carcinoma. Beside the principal mass a number of small points of invasion of the surrounding tissue is noted.

The growth seems to have encroached on the mucous membrane of the duodenum to a great extent."

GENERAL CONSIDERATIONS.

The recent great improvement in operation technique and in means of diagnosis giving better results have aroused much interest in the surgical treatment of disease of the stomach.

Pylorotomy was first done in man by Pean in 1879, and the first successful case was by Billroth, 1881.

The mortality was high in the early cases, but recently it has been much diminished.

The following table is probably not nearly complete, but will give a general idea of the mortality and also of the improved results of recent operations.

	cases	recovered	died
Winslow	60	16	44
Mikulicz	32	8	24
Billroth	19	8	11
Guinard	299	194	105
Czerny	29	18	11
Kronlein	24	19	5
Carle	14	3	11
Milkulicz	20	15	5
Hartmann	10	6	4
Wilmott Evans	13	12	1
Morison	5	5	0
Kocher	57	50	7
Mayni	25	21	4
Roux	12	9	3
Tuffier	9	6	3
Lambotte	5	4	1
Van Kleeef	4	1	3
Leeds Infirmary staff	7	3	4
Karg	4	4	0
Guessenbaur	13	7	6
Mayo	3	3	0

American Journal Medical Science, 1885,
Wemi Med. Nov. No. 24.

Referring to the above table we find that the cases collected by Winslow and Mikulicz (1 and 11) were the early cases done before 1885. They are probably duplicated to an extent, but as they give almost the same results this does not impair their value for comparison.

Taken together they show a mortality of 74 per cent. While the rest of the table taken from an article by Mayo Robson, which shows the combined mortality of both the old and new cases. Shows 572 cases, recovered 399, deaths 174. Mortali

30.4 per cent. Could the old cases be eliminated, this mortality would be much further reduced.

Lancet, March 24, 1900.

This remarkable result shown by Kocher 57 cases with a mortality of less than 9 per cent. gives hope that we will soon be able to class this as one of the operations, not excessively dangerous.

The remote result of the operation unfortunately have not been so good. Most of the cases being relieved for only a short time, and later showing recurrences. Fifty successes of Kocher showed one woman living 10 years without recurrence, one five years, one three years and one two years. Four died of other troubles without recurrences after three or more years, so we may claim these eight cases as permanent cures out of the fifty-seven cases operated on. The other cases of the fifty-two who survived the operation were made more comfortable and in the aggregated had many years of useful life added to their existence.

I think that we may now consider some of the general facts, bearing on the cases and influencing the results of the operation.

CAUSATION.

Unfortunately we are still in the dark as regard to the etiology of malignant disease. True, much recent work has been done along this line and reports of the same have been made. This will no doubt be of great value in the future, as yet however, we have nothing accepted by the profession as proven. We have good reason to hope that we shall soon have light on the cause of this terrible scourge, and that this may lead to improved methods of treatment.

DIAGNOSIS.

Great advance has been made along this line. Some points in the natural history of the disease will help us in coming to a correct conclusion. Cancer occurs usually after middle life but there are many exceptions to this rule.

*A paper by Prof. Wm. Osler and Dr. McCrae gives the proportion under 30 years in a collected table of 3257 cases 2.5 per cent. In 150 cases from the Johns Hopkins Hospital 4 per cent. were under 30. Men are more often the subject of gastric cancer than women. The position of the growth is most frequently the pylorus, over 60 per cent. of cases being found here. Among the symptoms pointing to this disease we note briefly pain, dull, often continuous, and increased after eating; belching of gases, often foul; vomiting of partly digested food, later, mixed

with decomposed blood; (coffee grounds) loss of weight and energy, temperature not infrequently sub-normal, but may be elevated in rapid cases near the end.

PHYSICAL SIGNS.

Usually some dilation of stomach when growth is at the pylorus. The presence of a mass can usually be made out by examining patient frequently and in various positions, (the value of change of position was well illustrated in my case.) The stomach should be examined empty and distended both by gas and fluid. Great assistance can be obtained by careful examination of the contents of the organ. Absence of HCl. while not a positive sign points strongly to the cancer. Excess of lactic acid is suggestive of cancer, the finding of parts of growth in the wash water may enable us to make a positive diagnosis; unfortunately, this is possible only late in the disease, and often after the time for radical operation has past. The X ray may help us make out a mass.

Finally the exploratory incision should be considered as almost harmless as they are in other parts of the abdomen, and should be employed early, as soon as we have strong suspicion of cancer, this will enable the surgeon to attack the growth while it is still small.

When a neoplasm is found after opening the abdomen the selection of the proper operation for the case is of great importance.

If the lymphatic glands are involved and many adhesions are present the operation should be abandoned, or in case there are symptoms of stenosis present a gastro-enterostomy should be done. Pylorectomy is indicated when the growth is in the pylorus, and when the glands are free and the organ not much adherent.

Partial or complete gastrectomy is to be done when the tumor occupies other situations and the organ is free from adhesions.

When adhesions are present the operations becomes excessively dangerous and even when successful recurrence soon takes place.

The method of operating differs much with surgeons, Kocher first does a gastro-jejunostomy and some weeks later excises the mass, closing the two ends of gut.

His results have been better than any other surgeon who has had a very large number of cases. He does not like the Murphy button as he says it often fails to pass, and he reports one case where it was found in the stomach fourteen months after the operation, Dr. Mayo of Rochester, Minn., who has had five successful cases

and no failures always uses the button. Its advantages are the ease and rapidity with which it enables us to close the bowels.

The slough which it causes is probably advantageous as it removes tissues which is near the growth and are possibly infiltrated. It is not necessary to draw on the organ to so great an extent when it is used, thus dragging on the nerves and other important parts is avoided, which, together with the saving of time lessens the shock and the other bad results of long exposure and manipulation of the parts.

The case before you illustrates some important principles, to which before closing we will call your attention. The marvelous improvement in our patient's general condition and the small extent and the slow growth of the tumor lead us to hope that this will be one of permanent cure. The repeated washing out of his stomach after the operation relieved the patient of great distress and probably saved his life.

The rapid increase of cancer during the last few years makes the report of every operation more important than formerly.

Too many physicians and surgeons tend to despair the unfortunates who are attacked by this dreaded disease. Many, like Micawber, are waiting for something to turn up from the laboratory workers. That some other means of destroying or preventing this one of our worst enemies may be discovered, we all hope, but it would be the height of folly to fold our arms and wait for such a consummation, let us rather try to improve our known methods of attack.

Nothing will help us so much in this direction as early diagnosis and operation. Much is due to the stomach specialist in helping to perfect means of diagnosis; but often he treats these cases until the disease has advanced too far. Careful lavage and diet not infrequently lead to temporary improvement; both physician and patient are soothed into a fatal sense of false hope, and procrastinate until the time for radical operation has passed. The exploratory operation will probably do more to save these unfortunates than anything else, and should be more frequent employed. Practically all these cases are operable at some period of their existence, and we have reason to hope that in future they will be referred to the surgeon at a time when the tumor can be successfully attacked, and not only temporary relief is possibly but when a large proportion can be permanently cured. The cases of absolute cure of cancer in other organs is becoming more and more common, surely we can hope for this same advance in cancer of the stomach where glandular involvement comes late in the disease.

DISCUSSION.

DR. CHAS. J. O'HAGAN.—I can only say that I think the Society is indebted to Dr. Branham for the remarkably lucid and interesting description of a very remarkable operation. I was in Baltimore at the time and saw the patient there, and he looked in the last stages of existence and I thought the operation could not be successful. The doctor has been kind enough to give us some information about the operation and I think he deserves a vote of thanks, and I move that he be given it. The motion was seconded and adopted unanimously.

Shall we use Anodynes and Anesthetics in Midwifery.*

By N. P. Boddie, M. D., Durham, N. C.

This is a question of very great importance, and perhaps a good many of you may think it has been answered long ago in the affirmative. But if you refer to the rank and file of the profession, you are very much mistaken.

A good many good physicians, and a majority of the laity, are bitterly opposed to and prejudiced against their use—so much so that those who would use them are afraid to do so and use them at their own peril.

Now, if I can provoke a free and open discussion of this important subject and thereby break down some of this opposition I will feel like I have done a good deed and won the good will and approval of the suffering mothers of our times, as well as the more sympathetic of our profession.

The first duty of any physician is to restore his patient to his or her normal condition, and to do this with as little pain and suffering as possible. Therefore, we conclude, if by using anodynes and anesthetics in our obstetric practice we can relieve our patients of pain and suffering without damage to them, it is our sacred duty to do so.

I do not say we can use these pain relievers indiscriminately and in all cases, but I do say, so far as my experience goes, there are very few cases, if any, in which we cannot use to advantage one or the other.

One of the greatest difficulties in the way of their use, as I have already said, is prejudice in both doctors and laity, and consequently if used at all, so little is used, or so unintelligently given, they do no good and possibly harm. I will try from expe-

*Read before the North Carolina Medical Society at Tarboro, N. C., May, 1900.

rience to give some practical suggestions on this subject.

Chloral hydrate, I think, is one of, if not the best anodyne and relaxant we have. We must have time, say two to four hours to get our patient under its influence, and it must be given in full doses, twenty to thirty grains every hour or two till one to two drams are taken. It takes more for some patients than others, usually about ninety grains are sufficient. You must give it until you get the physiological effects—patient semi-conscious and sleeping, awakening only during the contraction. Chloroform, say Squibb's, (only the best to be used) to be given during the contractions, anticipating them a little. Beginning the latter part of the first or dilating stage and continuing until the presenting part is delivered. And thus your patient passes this terrible ordeal without pain or knowledge of the transaction. It is hardly necessary to say our patient requires our closest attention.

But it pays in more ways than one. We win the love and esteem of our grateful patient, we have the approval of our own conscience of having relieved suffering humanity, and the commendation of all good people, by largely removing the incentive to commit possibly the most prevalent crime of our times, criminal abortion and prevention of child-bearing.

Are not all physicians largely responsible for this state of affairs, in paying so little attention to the intense suffering of obstetric patients.

Morphine deserves a large place in this subject. Who would try to practice medicine without a hypodermic syringe and morphine? None, I dare say, and they are as indispensable in obstetrics as in general medicine. A hyperdermic of a half grain of morphine, given when your patient is tired and worn out with nagging pains and rigid os, gives her one to three hours of sweet and refreshing sleep, and when she awakes rested, os relaxed and contractions normal, and with the aid of chloroform, completes labor in comparative comfort and in a few minutes.

When you have exhausted your skill in trying to stop abortion or miscarriage, tampon the vagina with antiseptic gauze or cotton, give a full dose of morphia, leave your patient to rest and when you return in a few hours, say from five to twenty-four, you will find the os dilated, and often the fetus and membranes lying loose in the vagina and so have very little trouble or pain in clearing the parts.

I do not say as routine practice, we should give a hyperdermic of morphine after de-

livery, but I do say that most of our multipara will be relieved of a good deal of suffering thereby.

It is barbarous to let patients suffer from those agonizing "after pains" as some do, when they can be relieved so easily and promptly. I find the coal tar preparations with Dover's powder and mono-bromate of camphor act nicely in these cases, but must be given in full doses. In some cases nothing acts so well or seems to do at all but morphine given hyperdermically.

I think we all will use more morphine in our obstetric practice in the future, if we will give it a fair trial, especially in rigid os and crampy contractions. One objection that is usually given to anesthetics and anodynes in midwifery is increased danger of post-partem hemorrhage, and this may be true. So "forewarned is forearmed." I take no risk but give a full dose of ergot on completion of second stage, and I also keep my hand on the uterus, gently but firmly pressing and kneading till the placenta is expelled, gently pulling on the cord and so avoid infecting the vagina after delivery. Watch closely the uterus for some time, to be sure that it is firmly contracted. If there seems to be any tendency to bleeding, I give a hot antiseptic douche at once. So I have never had any bleeding to bother. Another objection given to the use of anesthetics and anodynes is prolonged labor, and some times this seems true, but I have seen just as tardy labors when none were used. But agreeing that it is the case, is it not far better to deliver our patients in comparative comfort and with least possible danger of lacerations, with a slow labor, than to deliver them with a quick labor and have torn parts, intense agony and an exhausted and disgusted patient?

Let's all resolve we will do more to relieve the suffering motherhood of our country. None are more deserving and none who suffer more or have so little done to relieve them.

Symposium on the Biology, Pathology and Treatment of Tuberculosis.*

By Paul Paquin, M. D., Asheville, N. C.

Tuberculosis depends on three factors:

1st. Predisposition of a complex physical nature.

2nd. General and special feebleness and deterioration of the tissues in the system, or some given organ or sets of organs by which the natural cellular activities and vital forces are more or less depressed.

*Read before the North Carolina Medical Society, at Tarboro, N. C., May, 1900.

3rd. The destructive action of the bacillus of tuberculosis and the complicating germs by their presence and their biologic and chemic actions.

It stands to reason then, that with such a complicated pathology as must result from this combination of bases and causes, the physician needs to study each tuberculous patient closely to decipher the kind and nature of involvement present, and to realize the extent and sort of lesions existing. In this field, and with the view of inducing a conception for the proper kinds of remedial measures in given cases of pulmonary tuberculosis, the writer has carried on some bacteriological investigations and made numerous observations in the last ten years. As this paper contemplates only the explanation of mixed infections as a basis for proper remedies, I will be brief.

In the first place, I divide my tuberculous patients as to the origin of the disease into two classes:

(a) Those born of tuberculous parents—usually slow types with comparative low fever. These present usually feeble, spare, emaciated, bony, slim physiques.

(b) The purely accidental class, among which we find a majority having had a more or less robust constitution.

Then I sub-divide these into five classes, to-wit:

(c) The cases in which the expectoration is slight or almost nil, and in which the secretion and excretion contains various matters, chiefly mucus, some with grayish pigment, varied germs, but no bacilli of tuberculosis.

(d) The class in which the bacilli of tuberculosis are alone or are found preponderate, and the other germs are in exceedingly small numbers—harmless numbers, I am tempted to say.

(e) Those in which both the bacilli of tuberculosis and other infectious germs are present in numbers to produce each or combined some degree of toxemia and slight fever.

(f) Those in which the harmful complicating germs preponderate in quantity and quality, usually attended with more or less pronounced toxemia with characteristic fever.

And then again another sub-division is finally made from the nature of the lesions, to-wit:

(g) The class known as miliary tuberculosis, in which the desseminated invasion of one or more lung is more or less extensive, by the bacilli, in a rapid manner and with the formation of few or no tubercle.

(h) The class with congestion, with or without hemorrhages.

(i) The class with cavities more or less pronounced, producing, or failing to produce, hemoptysis by destruction of vessel walls.

(j) The class known as fibrosis, which means an effort of nature to heal lesions by the formation of fibrous tissue.

By this method of division and sub-divisions, based on historical facts, physical examination, bacteriologic and microscopic analyses, I come to conclusions upon which guess work is eliminated in the application of remedial measures, and the danger of falling into the too common and often fatal error of riding a hobby is removed. Indeed, exclusive hobbies in the treatment of such a complicated disease as pulmonary tuberculosis are, at this stage of our experience and knowledge, so frequently a crime that one is not justified in neglecting any of the essential inquiries in each case to gain the best data obtainable for a proper and sufficient diagnostic judgment. Failure in this respect results in more or less guess work, and guess work is the foundation of misleading and the exclusive medical mania which sometimes end in destruction of life or loss of opportunities to cure.

By systematic studies, as I have mentioned, I find, first, the need to consider the history of each case, and the physical, mental, digestive, and other factors; second, the need to consider the lesions apart from the germs connected therewith; third, the need to consider, not only the bacillus of tuberculosis, but every other kind of germ, their special individual effects, and the pathologic phenomena to which they contribute in union with the bacillus of tuberculosis, or separately, or by virtue of their proliferation in tissues in good health or already diseased, or perhaps, by possible, if not probable, biologic evolution of harmless and semi-harmless germs into virulent factors under certain conditions, and the chemic transformations or combinations that may take place between the products of various germs growing together.

In this paper, however, I must leave out of consideration the lesions themselves, although each of them demands most careful notice at the hands of the practitioner. A hemorrhagic centre from congestion, for instance, needs a different treatment than a hemorrhagic centre from the destruction of a blood vessel by microbes. A consolidation by infiltration needs different attention from a consolidation from hemorrhage. And both kinds of solidification must be considered apart from a consolidation by fibrosis. And in each of these varieties, and all other varieties, besides the necessity

of deciphering and realizing the lesion or lesions existing, we must decipher and realize the kind of germs developing in connection with them.

In cases of tubercular involvement prior to the specific germs appearance into the sputum, we are left to be guided chiefly by physical data, though the expert find important deductions in various analytical tests.

In pure tuberculosis the bacilli of tuberculosis predominate; the other germs are too few in number to be of immediate danger; still, the possibility of their rapid development under numerous circumstances warn us to act on the defensive. In cases where the complicating germs play an important factor, as in the classes E and F, the physician need know of their presence and influence and act accordingly. The chief complicating germs which are usually found in connection with tubercular infections of the respiratory organs are: the staphylococci, the streptococci, the diplococci, the tetragen. The first three are known to have, individually or collectively, more or less deleterious effects, by their power to soften tissues, poison the cells, intoxicate the nervous system, and reduce the vital powers of the blood, thereby aiding the bacillus of tuberculosis in its destructive work. The tetragenus is uncertain in its effects. In some cases these germs, or some of them, precede the appearance of the germs of tuberculosis, and possibly prepare the field for the growth of the latter.

Besides these germs, one often meets with numerous air germs of indefinite properties, and not uncommonly the pneumonia bacillus and the grippe bacillus, in both of which instances we usually find lesions or witness symptoms of pneumonia or grippe.

With this exposition of the basis upon which the careful and conscientious physician should institute his treatments, I yield to the essayist who will follow me, and suggest remedies for the affliction in the pure and complicated conditions; in so doing feeling that I might be debarred of sufficient time to discuss treatments, I wish it distinctly understood that, after many years of experimental and clinical work, I cannot agree to any of the many exclusive therapeutic measures vaunted by their authors, and feel justified in warning the practitioner that it is as unwise for him, and dangerous and unjust to tuberculous patients, to treat them in a way to depend wholly on a specific remedy and neglect accessory means which experience and science have demonstrated as useful. I was first in experimenting and suggesting and using serum for tuberculosis in America, and first to intro-

duce serum from immunized horses in any country. Yet considering the bacteriology and pathology of the disease as above explained, I use antitubercle serum only in such cases as experience has taught me its merit, and they constitute a vast majority. I neglect nothing else that might be useful, such as inhalations, medicated air, ozone, tracheal injections of antiseptics, climate, dietetics, hydrotherapy, electricity, etc., etc. I apply such measures as appear right after taking cognizance in every case of the various germs and lesions that play a part in the phenomena of tuberculosis. In this statement, which in a measure anticipates the paper of my associate in the symposium, I feel it incumbent to apologize to him for intruding in his territory. As I said, my excuse is that I may be unable to make the statement in discussion.

Symposium on the Biology, Pathology and Treatment of Tuberculosis.*

By C. V. Reynolds, M.D., Asheville, N.C.

I hesitated for some time before selecting the above as my subject, but when we see the cry for help depicted upon the pale, aremic, forlorn and emaciated faces of the poor, unfortunate tubercular patient, and with the death rate of 16 per cent. of all humanity fast ebbing away by this dreaded monster, can you wonder that the pages of medical journals are filled with thoughts and suggestions in their behalf, with the hope of adding something to lessen this alarming death rate?

It is a proven and unquestioned fact that a systematic bacteriological report of examinations of sputum is of paramount importance in the management of tuberculosis. It would be an imposition upon you gentlemen, and merely a waste of time, to describe the technique of examining sputa, but will say the method of estimating the number of bacilli proposed by Nuttall, which consists essentially in rendering sputum fluid by adding a solution of caustic potash and making several mounts and counts of same specimen, thereby estimating number expectorated in 24 hours, is of great value in prognosis and treatment, but as it is the nature of this bacillus to hug the connective tissue surrounding the infected area, and especially in the incipient stage, where there is not much breaking down and pus, we often fail in our examinations entirely; then upon the second examination we may find our field studded with pus cells, strep.,

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staph., dip., and everything that would suggest tuberculosis; upon the third examination our efforts may be successful, and tubercle bacilli will be found.

I agree with Nuttall as to the great importance of the examination of sputum for diagnosis, but with an experience of about 3,000 specimens examined, and noticing how greatly the mounts from the same sample vary, and realizing how difficult it is even when every other symptom indicates improvement to cause complete disappearance of the bacilli, for I have noticed bacilli in abundance when there has been an increase of respiratory expansion, diminished infiltration, etc. After such an observation I cannot attach as much importance as to prognosis or treatment, but nothing is of greater importance as a means of diagnosis.

Second to the above merely in diagnosis, and first to give us knowledge as to our patient's improving or succumbing to this disease, we get by a systematic examination of the blood, which gives us the key whereby we can see at a glance the constitutional effects of our treatment. Dr. Holmes, of Denver, speaks very highly of the examination of blood as a means of diagnosis in the early stages of phthisis by means of the degenerative changes within the leucocytes. This I am not prepared to ratify or deny, but merely bring it before you for discussion.

Dr. M. L. Stevens, of Concord, who is now in Asheville, has partially completed a series of examinations of blood in tubercular patients, and so far has reached the following conclusions:

"A blood count only gives a small part of the information needful in these cases. Thorough examination of stained specimens is also necessary. Degenerative changes in the leucocytes are present in all cases of advanced tuberculosis.

Arrested or perverted development of red cells is present in all advanced cases.

The changes produced by treatment in both red and white cells approach toward the normal or retrogression therefrom constitute our most reliable data on which to base the ultimate prognosis of the case."

My observation has been that the blood in most of the cases, especially after the incipient stage, and when there is some mixed infection, is profoundly altered and devitalized. Nearly all inflammatory and infectious diseases are characterized, as you know, by leucocytosis, phthisis being an exception, there being a diminished amount of leucocytes in quality, if not in number.

J. H. Burch, in a paper read before the Syracuse Academy of Medicine, cites a very interesting case in which the patient was

supposed to have had typhoid fever, but failing to get a reaction from any of the typhoid tests, a blood examination was made, and there was found present red blood corpuscles normal, leucocytes diminished, those predominant, being the large uninuclear lymphocytes, and now and then a myelocyte. This suggested acute tuberculosis, which was confirmed several days later when a specimen of sputum could be obtained.

I have examined several cases of blood of tubercular patients, and found as a rule red blood corpuscles greatly diminished in number and in a degenerated condition, with leucocytes, sometimes large, sometimes small, there seeming to be in some no cell wall, nuclei fragmented, and frequently just an irregular mass of broken down matter.

Upon the second or third examination, if your patient is doing well upon your treatment, you can see these blood cells take on a healthy appearance, increase in number, and witness with your patient the grand results of your labor.

Not so in the examination of sputum. Each month both you and your patient are disappointed by finding your examination unsatisfactory, which casts a gloom upon him, and at least an interrogation point as to your treatment.

Now, gentlemen, the leucocytes are nature's army, and it is by their chicanery and fortitude we expect to a great extent our result in the treatment of this disease. So it seems to me that in the future, if not in past, we should watch closely after their condition, and see, if possible, that nature's "antitoxine" can't be kept at par.

Koch, since 1897, had extracted from tubercle bacilli by allowing it to stand three days with temperature of room, with 1-10 normal soda solution, after which the fluid was filtered, but the filtrate was never free from bacilli, although dead, and when used, periodical chills, fever and abscesses were produced. To remove this objection this precipitate was filtered through porcelain, and the bacilli was found to be absent, and no abscess was formed.

The use of this tuberculin upon the human being should give no ill effects in a non-tubercular subject, but it has a selective action, and localizes itself at the seat of infection, producing a hyperemic congestion which may cause resolution, or add kindling to the fire causing it to flare up, and death result, which otherwise would have rested quietly in its latent state. I think Dr. Paquin, who has made experimental tests, will bear me out in my assertion of the above statement. As it is in cattle, so in man it may

be of great value in distinguishing a tubercular from a non-tubercular subject, but you kill the infected cow, and under the same penalty, how would you like to be the man? This tuberculin is the specific chemical poison of the bacillus of tuberculosis, and great honor should be to Koch for his untiring energy and research in solving this great mystery, and thereby adding so much to medical science, but the use of a toxine for diagnostic purposes, which may cause a waking up of a slumbering disease, which may result in death, is a question indeed.

Koch, Fisch, Behring, for a long while doubted as to which toxin was best to utilize in preparing the antitoxine from which they might get best results, until proven by Behring's researches that it was essentially the same, whether old tuberculine, T A, T O, T R, or any other modification, were used, the practical difference being in the degree of toxicity and the intensity of the antitoxine.

Behring maintains the principle which Paquin has held from the time he introduced serotherapy in tuberculosis, merely that the only way to immunize an animal or man against tuberculosis is to use a tuberculin containing all the active principles or poisons found in the germ and its products in cultures. As Maragliano and Paquin were the first to introduce serotherapy in tuberculosis in the world, and as Behring is master in that line of investigation, we are warranted in adjudicating their position as substantiated by science.

Say then an animal treated with tuberculine, from which an anti-tubercular serum is secured, their serum acquires the property of neutralizing the poison produced by the toxin of the tubercle bacilli. Suppose this to be the fact, and we have the toxin in the system neutralized, a question naturally arises, what destroys the bacillus itself? It seems to me to simply destroy the toxic effect of a poison and not get directly at the manufacturer of the toxin itself, would merely keep the trouble under control and never eradicate the disease?

I cannot understand this unless it aids us, and at last we are compelled to return to our old friends—Nature's germicide, the leucocyte, to destroy the intruding and unwelcome visitor, the tubercle bacillus.

Inanition Fever of Infancy.

By R. C. Ellis, M. D., Shelby, N. C.

Ancient mythology teaches us that Prometheus, the son of Japetus, was the first

to make men out of clay and to bring fire from heaven in a reed, and showed them how to keep it wrapped in ashes. For this offense Vulcan, by the order of Jupiter, fastened him with iron nails to a rock, an eagle being placed near him which gnawed at his heart. In subsequent time, Hercules pierced the eagle with arrows, and thus liberated Prometheus.

The application of this fable to my subject is, that the fire from heaven represent that spark of life which exhibits itself in the new-born infant. Keeping it wrapped in ashes, is the efforts we may put forth to retain its vitality. Fastened by nails to a rock, indicates the complete helplessness of the little one. The eagle gnawing at its heart, hunger—that distressing craving and unfulfilled demand of Nature, dreaded by man and beast, and evoking the sympathy of the civilized world. Ample provisions are made all over our land for the imbecile, the pauper, the maniac, in the way of homes and asylums of different kinds, that none of their inmates may feel the pangs of hunger. Will not mercy and medical science raise their hands in horror at the sight of a little sinless being, fallen a victim to that dread monster, starvation, with no one to rescue and no one to save? A weeping mother, still feeble from the shock and agonies of parturition, sees, perhaps, her first-born withering away hour by hour like a tender plant beneath the rays of a tropical sun, and she looks to no other source for aid than the family physician; and should he not bestir himself, and awake his powers with the energy of a Hercules, and give this subject his most profound thought, study and attention!

By the term inanition fever, it is my purpose to express as well as emphasize a very close connection which exists between the rise of temperature and the condition of inanition or starvation in the new-born.

In the above heading are included cases seen during the first five days of life—usually from the second to the fourth day—in which there is an elevation of temperature seemingly due to the fact that the infant obtains very little, oftentimes nothing, from the breast at which it is nursed. Another characteristic of these cases is a sudden decline in the temperature when milk is secreted in abundance, the infant put upon a full breast, artificial feeding is begun, or even water is given freely. A failure to observe these precautions at the proper time, has doubtless contributed much to increase the table of infant mortality,

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hence my reason for selecting this seemingly trivial but important subject.

It is to be greatly regretted that so little literature has been published by writers on pediatric medicines concerning the subject of this paper, but future authors will no doubt continue their investigations and thus give to the world such information as its importance demands.

From a careful study of the literature it seems that Dr. McLean, of New York, (1890) was the first to call the attention of the profession to this condition, he having reported to one of the medical societies an extraordinary hyperpyrexia in the new-born child. The infant was found on the sixth day with a temperature of 106 deg. F., near which point it remained for three days. The breast from which it nursed being absolutely dry. A wet-nurse was procured, the temperature fell to normal in a few hours, and the child, which, when first seen was apparently in a hopeless condition, was soon perfectly well.

Holt relates the following typical case of the more severe form: The patient was the second child, the first having died at the age of ten days, from no disease, it was said, but simply from exhaustion. At birth the infant, a boy, weighed $8\frac{1}{4}$ pounds, and was apparently vigorous. During the first forty-eight hours his loss in weight was $5\frac{1}{2}$ ounces and his condition good. Was seen on the evening of the third day. In the preceding twenty-four hours he had lost eight ounces in weight, and the temperature had gradually risen until at the time of my visit it was 102.5-10 deg. F. The body was limp, the child making no resistance to examination. He cried with a feeble whine, the restlessness of the early part of the day having given place to complete apathy. The lips and skin were very dry, the fontanel sunken, the pulse weak. As the father, a physician, expressed it, "he had been wilting through the day like a flower in the sun." Although put to the breast regularly the child had gotten very little. It was, in fact, impossible to squeeze milk from the mother's breast. Water was given freely and a wet-nurse secured in a few hours. The first milk was taken from the wet-nurse at 11 P. M., and the temperature, which fell gradually during the night, was normal the next morning and did not rise again. During the succeeding four days the child gained eighteen ounces in weight, and at the end of a week was as well as an average infant of his age,

The uniformity of symptoms and characteristic features of these cases of fever entitle them to a class of themselves. Pyogenic infection, which rarely begins before

the sixth day, can hardly be confounded with this fever. In the treatment of these cases, water should be given regularly in quantities from a half to one ounce every two hours if required by the thirst of the child. This should be done in every case where the temperature reaches 101 deg. F. Where the temperature does not begin to fall at once, the infant should be placed upon another breast, or artificial feeding promptly resorted to. The breast from which the child has been nursing will, on examination, usually reveal the fact that the secretion of milk is very scanty and often entirely absent.

In conclusion I will say, that very much to my regret, owing to the hurried preparation of this paper, while I, perhaps, have not edified those to whom it has been read, I shall feel deeply grateful for the task, if I have succeeded in calling the attention to, and eliciting the interest of so learned a body of physicians as compose the North Carolina Medical Society in a subject, the management of which, to some extent, affects the population of our great Commonwealth.

The Ambulatory Treatment of Fractures Involving the Bones of the Leg.*

By A. S. Pendleton, M. D., Warrenton, N. C.

The title of this paper may lead you to suppose that the treatment to be discussed is a radical departure from the old established lines, but before we have proceeded far you will have discovered an old friend, upon whom Times has wrought some changes.

All honor and credit for the innovation should be given Dr. G. W. Galvin, of Boston, who, so far as I am aware, was the first in this country to either use or advocate the plan that I shall now try to give you in detail.

The treatment differs from that usually adopted in that a plaster cast is applied immediately after the injury has been received, or as soon thereafter as is practicable, passive motion is used earlier, and the patient is allowed to walk on crutches from the beginning, and to bear a part of his weight on the injured leg so soon as union has begun.

Let us take a Pott's fracture, the one for which the treatment is most peculiarly fitted, and follow its course from the receipt of injury to the discharge of patient, as in

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this way the differences may be more readily shown.

For the relief of pain, the injured leg is immersed in a hot creolin bath (3ss to O) and allowed to remain from one-half to one hour. The fracture is then reduced and a plaster cast applied, over cotton batting, from the ball of the foot to the tuberosities of the tibia, the heel being covered or not as is preferred by the surgeon. The patient is allowed to walk on crutches, the foot of the injured leg touching the ground, but is instructed to bear none of his weight upon it.

At the end of a week the cast is removed, passive motion used, and the cast reapplied. This procedure is repeated every third day during treatment. On the 12th to 14th day union will usually have begun, and then the patient is told to bear a part of his weight on that leg but to "favor" it. On the 21st day, if union seems to be firm, and this is almost invariably the case, the cast is replaced by careful strapping with adhesive plaster, permission to discard crutches and use a cane instead is given, and the patient told to report in one week when the adhesive plaster is removed, a bandage applied to prevent swelling, and the patient discharged ready to begin work.

When the fracture is of the tibia or of both bones, the cast is retained about a week longer and none of the weight of the body is borne by the leg till the 18th to 21st day, so lengthening the treatment about a week. Otherwise there is no change.

Where the fracture is compound, if union by first intention is secured, the foregoing method may then be applied as to any simple fracture.

If the fracture is multiple or comminuted, the ambulatory treatment may be employed, but, of course, a longer time will be required to effect a cure.

A tendency to the formation of blood blisters over bony prominences, which is sometimes seen, contra-indicates the use of this plan of treatment.

Let us now consider the advantages of this *modus operandi*.

The immediate application of cast to a certain extent prevents swelling about the seat of injury, which, when excessive retards union, and diminishes muscular spasm which is so often a source of great pain after fracture. The early use of passive motion, and of the leg, reduces to the minimum the stiffness resulting from treatment.

That wearying lying in bed so distasteful to all, and even endangering the lives of a few, and which so quickly saps the strength and injures the health, is avoided.

The swelling of the leg usually following the regular treatment is most often conspicuous by its absence, and when present is of slight degree and readily relieved by bandaging. When the patient is discharged, not only has a cure of his fracture been effected, but his general health and strength have been retained, and he is ready to begin work again. Allow me to add that the latter is of no small importance, more especially when the patient belongs to the laboring class.

Now what are the disadvantages of this method? You will say at once, the probability of deformity, of delayed union, or of having to deal with an ununited fracture.

In answer let me say, that the stimulation caused by the slight motion of fragments seems to hasten rather than delay union; that, though I have before me while writing, reports of 97 cases so treated, in not one of them was an ununited fracture the result; and that, from the results obtained by others who have used this method, and from my own experience with it, I have no hesitancy in declaring that there is no greater tendency to deformity than with any other treatment.

Allow me to present a condensed report of a few cases to further support the position I have taken.

CASE 1.—R. H., Irish, age 34, male, miner. Lump of coal fell on left leg. Typical Pott's fracture. Creolin bath one-half hour; fracture reduced and cast applied. Allowed to bear weight on leg at end of 2nd week. Cast removed 22nd day and leg strapped. Crutches discarded on 29th day. Adhesive plaster removed and leg bandaged. Patient allowed to return to work, but told to report one week later. 36th day—no trouble experienced from use of leg; no deformity other than slight nodules at seats of fracture.

CASE 2.—G. R., teamster, German, age 41. Leg run over by wagon. Transverse fracture of tibia about the middle of shaft. Oblique of fibula at junction of lower and middle thirds. Creolin bath one hour. Plaster cast reduction.

21st day.—Allowed to bear weight on leg; union apparently firm.

29th day.—Cast replaced by strapping with adhesive and bandaging; allowed to walk with cane.

40th day.—Adhesive removed, leg bandaged and patient told to return to work and report one week later.

47th day.—No trouble from use of leg. No shortening and no deformity save that produced by callus at seats of fracture.

CASE 3.—H. S., Italian, miner, age 37. Bank of coal fell on right leg; compound

fracture of right tibia. Very dirty; oblique of fibula lower third. Thoroughly cleansed under ether. Ends of Tibia freshened and sutured with Kangaroo tendon. External wound closed with silk worm gut. Leg put in fracture box and application of cold through coil for 36 hours.

10th day.—Union of soft parts by first intention, Cast applied with window at seat of external wound. Patient allowed to walk with crutches.

30th day.—Union apparently firm, but patient not allowed to bear weight on leg until 33rd day.

40th day.—Cast retained, but patient allowed to walk with cane.

45th day.—Cast replaced by adhesive plaster.

50th day.—Adhesive plaster removed and leg bandaged. Patient told to go to work if he wanted to. Union firm. In this case there was one-half inch shortening, otherwise the result good.

I shall be glad if any one, who is familiar with this plan of treatment, will give us the benefit of his experience.

In conclusion, let me say that, if the thinking members of our Society, who have had experience with the use of plaster casts, will consider this method and give it a trial, with any changes that their good judgment and the exigences of the case may suggest, the object of this paper will have been accomplished.

DISCUSSION.

DR. L. J. PICOT.—I must thank Dr. Pendleton for his most excellent paper, and place myself on record in substantiation by saying as long ago as 1878, soon after the introduction of plaster paris, I began this treatment. I never have used creolin dressings, but I always did my very best to put on a spiral and reverse bandage so smoothly and evenly that it would prevent muscular contractions. Bandaging now is almost a lost art I am sorry to say. I will only report one case. This was the most useful of all our domestic animals, a horse. A young man came to me one morning with tears in his eyes and in his voice, begging that I would go and see his favorite horse that had its leg broken. I found the leg broken about half way between the knee and ankle joint. I had two men to grasp around the hoof and hold his leg while I adjusted the fragments of bone, and after the spiral and reverse bandage I put on a solid plaster cast and turned the horse loose in a green wheat field. After five or six days he jumped a five rail fence and after three months he was cultivating the crops. Dr. O'Hagan was there shortly afterwards and I brought

up the horse for exhibition and he commended me and the young man and the horse.

PRESIDENT LONG.—Dr. O'Hagan is a man of fine taste.

DR. C. J. O'HAGAN.—I have always been in the habit of treating fractures by the old method, but the method suggested by Dr. Pendleton commends itself to me first of all, for its simplicity, and allowing the patient to move about in the open air. The fact of that tends to hasten convalescence and according to his experience it certainly has been attended by very remarkable results. My friend, Dr. Picot, called my attention to the horse case and I looked upon it at the time as a triumph of surgery, from the fact that horses with broken legs are usually destroyed, owing to the impossibility of securing fixation. Living in a small country village it does not often happen to me to see many fractures. In all probability I will have but little opportunity of testing the value of that treatment during the remainder of my life, but the method certainly commends itself to me as an improvement on the old method and if it falls to my lot to have a case of fracture I shall certainly try it and report it at the next meeting of the Society. I would be glad to hear from some of the younger gentlemen present, who will probably have much greater opportunity than I for testing it, and it will be well enough for them to contribute their experience hereafter.

DR. LAUGHINGHOUSE.—I would like to ask Dr. Pendleton why creolin is used.

DR. PENDLETON.—It has been my experience that it relieves the pain better than anything else that can be used in that way. That covers a hospital experience where I had an opportunity for seeing a good many fractures. I would like to say also, Mr. President, that the cases reported were average cases so far as the duration of the treatment was concerned. I have treated one case in which the patient never used a crutch, only used a cane to walk to and from his place of business. He was a cutter in his tailoring establishment, and must needs stand on his feet 8 hours a day, and in his case the result was what is usually considered as good in the treatment of Pott's fracture. That is, there was an enlargement at the seat of fracture of the fibula, and this, by the way was a typical Pott's fracture, in which the tip of the internal malleolus was chipped off and there was some slight dislocation of the fragment. There was no perceptible stiffening 6 weeks later. Of course we could not expect to do that in private practice. The responsibility was shifted on the patient here. I told

him at the time if he was willing to make the experiment I was. I would say in a large number, perhaps 25, possibly 35 cases, in which only the fibula was involved, and perhaps in the lower one-fifth of the shaft I use a plaster cast for two weeks, followed by strapping, practically replacing the plaster paris bandage by rubber, the fixation being practically as great as the plaster, more resistance, more elastic, lighter, and more comfortable, and in my opinion should be used as quickly as possible in the treatment of any fracture. My rule always was at the end of the third week to replace the plaster cast with adhesive plaster where the fibula only was involved unless there were considerable laceration of the ligaments of the ankle joint.

DR. H. T. BASS.—If I understand the doctor he puts the fracture in his creolin bath one-half to an hour before he sets the fracture. I would like to ask the advantage in regard to that.

DR. PENDLETON.—The action of the creolin in hot water has a tendency to relax the muscles and makes the reduction much less painful for the patient.

Cough.*

By Edwin Gladmon, M. D., Phar. D.,
Southern Pines, N. C.

In response to a request for a paper before the section on pediatrics, I have chosen the subject "Cough," because remarks thereon are as applicable to the age of maturity as to the age of childhood.

A cough is the signal given by the newborn babe that air has entered the lungs, and that they are now ready to perform their part in the battle of life. A cough of some kind or variety accompanies nearly every departure from the normal state of health; and when in most diseases the power to cough is lost, we know that generally it means the beginning of the end, and that life's fitful fever will soon be over. Among the myriad medical truisms presented to us in this eventide of the nineteenth century, there are none that stands out with more vivid distinctness than the fact that "cough" is a symptom and not a disease.

With the word "cough" we unconsciously associate the word "expectorant." From time immemorial a cough remedy meant an expectorant. In fact expectorant means "out of the pectus," or out of the breast. But we now know that the cause for some

of the most distressing coughs that harass mankind, have no relation to the chest whatever. As this truth impressed itself more and more on the minds of medical men, efforts to fathom the etiology of cough were redoubled, and the results have well repaid their labors.

We understand now that a cough is one of nature's methods of giving an alarm that all is not well within. The various nerves governing the mechanism of cough are like sentinels that never sleep. Whenever within their domain, a point of irritation arises, the alarm is given, the lungs distend with air, the glottis closes, and the thoracic and accessory expiratory muscles expel the air like a shot from a gun. Indeed we may liken it to a shot fired by a sentry on guard. If the cause is not removed nature persists in her warnings, and cough will follow cough as long as vitality lasts.

Every cough is a query, a *conundrum*, and its most fitting symbol would be the interrogation point. A patient with a cough is indeed a sphynx who asks questions that if we are unable to answer mean continued ill health or even destruction. Every cough asks us why, and every hack wherefore.

If in a perfectly healthy man the cervical pneumogastric be irritated by the passage of a galvanic current, no power in the individual can prevent an effort to cough. This fact that irritation at any point along the pathway of a nerve will produce some result in the part or parts supplied by that nerve, dates back to the days of Galvani. Misunderstood and often misinterpreted, yet it is the key that has unlocked some of the most perplexing problems of modern medicine. And in no branch of it has the realization of this fact produced more brilliant results than in the etiology of cough.

The results of irritating a nerve purely motor or sensory in its function is well known and readily understood. But the results of irritating the vagus and sympathetic, the nerves concerned in the mechanism of cough, are so varied in extent, so infinite in variety, that an analysis of them comes near answering the problems of animal life.

When we consider how common is cough as a symptom, of how many human ailments it is an accompaniment, to what serious condition its continuance may lead, it is inconceivable how medical men for so long blundered with the idea that a cough remedy and an expectorant were synonymous.

Before entering on the practice of medicine, I was for several years in the drug business in Washington City. During that

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time I compounded probably over one hundred thousand prescriptions. In no other way could one learn how common it is with the best physicians to have an empirical formula for all kinds of cough. That statement was more true twenty years ago than it is to-day, but it is still true of more physicians than it should be.

I yet remember the names of prominent physicians whose cough prescriptions in order to economize time we prepared in large quantities, and dispensed as ordered. The term "shot gun" prescriptions describes them fairly well, and we may likewise consider them the forerunners of our latter day slot machines. You dropped a dollar or two in the physician's hands, fifty cents in the druggist, and out came your cough remedy always the same. How often in the advertisement of some quack cough remedy, have you read, "the favorite prescription of Dr. Blank." There was probably more truth in this part of the advertisement than in any other.

In seeking by induction the etiologic factors of cough we arrive at the general truth that cough may be caused by an irritation, direct or sympathetic, at any point along the pathway of the nerves governing the mechanism of cough, and that this pathway extends from the brain to the pelvis.

In few places can this fact be better demonstrated than in my own home at Southern Pines. While as yet we cannot compare in numbers with older resorts, there are represented here types of "cough" patients of almost every variety.

For about two months this spring I had under observation a young lady with a dry hacking cough, and a history of frequent recurring attacks of nasal hydrorrhœa. Examination under cocaine detected nothing abnormal. Further inquiry developed a history of extreme uterine retro-flexion, for which ventro-fixation had been unsuccessfully performed. Electrical treatments to correct the flexion were at once instituted, and the cough and discharge at once ceased without any other remedy.

Hysterical coughs are often met with here, and association with tubercular patients, give them often a wide variety of symptoms. Another patient, a lady about 45, was sent South for an intractable cough. It proved to be an interesting case of glosso-labio-laryngeal paralysis. After a two months stay she has gone home very much improved, not because she came South but because she received electrical treatments.

I am not prepared to say, however, that the improvement is more than temporary. A case somewhat analogous, a lady about

40, had been under a specialist's care for several months for an aggravated form of cough. Repeated examinations convinced me that there was an aneurysmal tumor pressing on the recurrent laryngeal nerve. She was recommended to consult a surgeon at her home in New York.

While a cough is in some cases a symptom of chronic pharyngitis, this latter may itself be but a symptom of some trouble more remote. Continued cough from any cause eventually affects the pharynx, and it may also be secondary to various gastric disorders. In turn the latter may depend on faulty excretory organs. So in some cases the stomach tube is a cough remedy, just as in others a pair of scissors is. And this reminds me that I often meet an uvula clipped, when the cause was elsewhere.

As you see, this paper deals more with generalities, than with details. The various etiological factors of cough, are now stated so frequently that repetition here is unnecessary. But I cannot close without strongly emphasizing the importance of local treatment, no matter what may be the origin of the cough.

If while looking at a normal pharynx you require the subject to cough, you will notice the surface assume a congested aspect, like unto the cheek of a bashful school boy. The longer the cough is continued the more suffused with blood does the membrane become. Thus you see that every disease accompanied by cough if long continued, the pharynx will eventually become involved, and we then have a new cause for cough. Every cough due to pharyngitis can be invariably relieved, and while it may recur, if the pharyngitis is but secondary, still as often as it does recur it can be abated.

These statements and deductions are equally as applicable to the larynx as to the pharynx. It has been to me a source of constant wonderment to see patients come here with extensive pathological lesions of the larynx and pharynx for which no local treatment had ever been attempted. There is nothing more pitiable than to see a patient with tubercular laryngitis, to whom even a teaspoonful of water means a paroxysm of pain; and I know of nothing within the province of the physician yielding more satisfaction than the knowledge that euthanasia is possible, and the little of life left them can be spent with comparative ease.

As bearing on this subject let us take the old time remedy, cod liver oil, either in its pure state, or its various emulsions with egg, gum, malt, petroleum or Irish moss. It has undoubtedly cured many coughs—how did it act?

It is not possible in any disease with any remedy, to strike an exact balance, because the *vis medicatrix nature* cannot be measured. But as far as we can trace it when a dose of oil is taken, what is its mode of action! In its passage downwards it reaches the buccal cavity, the pharynx, epiglottis, œsophagus and stomach. During this passage how has it helped the lungs for instance? It has not touched them. It is true these oil globules may finally reach the circulation, and feed wornout nerves. That is very essential, but that is a property of food and not of medicine. In what other way does it help? Generally speaking I have but little use for cod liver or any other oil, but in some cases it is beneficial; in what way does it act? It helps the lungs when it gives them rest, and it gives them rest when it lubricates an irritated pharynx and thus removes a frequent cause of cough in tubercular disease. But lubrication equally as efficacious may be gotten by the application of petroleum oils and other remedies, and this too without the danger of stomach derangements that so often follow the administration of oils.

This explanation takes no account of the iodine and bromine contained in the oil. That they have value in some cases I admit; in fact some claim the whole value of oil is due to them. I have tried these remedies in their most potent form, i. e., hypodermically, and must say I think their value limited. But to come back to our question, how many physicians give the oil for its mineral constituents, and how many have a definite idea of just what they think it will do?

This question of rest for the lungs is a most important point in considering the treatment of cough. A person cannot cough without bringing into action the lungs and the muscles associated with the lungs. It is just as essential in order to heal diseased lungs, to give them rest from abnormal action, as it is to give rest to a fractured limb. Anything that will prevent cough conduces to this end, and soothing the irritation of the upper air passages, is a most potent method of doing this very thing.

That people are sometimes cured of coughs by the use of patent medicines is undeniable. It is hardly likely that millions of bottles would be sold did they not possess some curative properties. I am convinced this power to cure is largely due to the opiates they contain. The most widely advertised cough syrup of our generation contains nothing but acetate of morphia and simple syrup. To give morphia for a cough as a routine treatment, is

most unscientific and inexcusable; but even so, it will in the long run yield better results than the routine treatment by a medley of expectorants. The idea that to stop a cough is injurious, is more or less prevalent. What is there, must come up we are told. Now it is true that in lung trouble the results of necrosis must be removed. But it is not true that in order to do this the patient must cough and hack the greater part of each day and night. It is necessary each day that the contents of the bowels and bladder be evacuated, but continuous movements are not necessary to accomplish these objects. Throughout these remarks I have reference particularly to unnecessary coughs and, excepting advanced bronchial and pulmonary disease, it is surprising how little cough is necessary.

If a naturalist were presented with a bird to him unknown, it would require long study to properly classify it. The next time he would class it more quickly, and with extended experience he would not need to examine the whole bird; a wing, a head, or a tail would suffice. Just so it seems with many cases we meet in our little town of Southern Pines. Examination seems so unnecessary; their symptoms are so pathognomonic. But over and over again careful examinations have disclosed complications not before thought of. Routine in treatment is bad, but routine in examination is good.

Remembering how frequently the upper air passages are a cause of cough an examination should begin with the nostrils and extend to the trachea. Then would come the chest, the ear, and stomach. Next in order we seek for swollen glands or tumors, or enlarged organs, along the pathway of the nerves; next we look for constitutional causes such as the heart, liver, and kidneys. Nor must it be forgotten that in the orifices of the body may often be found the solution of our problem.

As to the treatment of cough in infants and children, but little need be said regarding medication. Until a babe is educated (?) he knows no better than to breathe through the nostrils. The slightest cold in infants will occlude the nasal passages and then begins incessant cough and a struggle for breath. With a camels hair pencil or a pledget of cotton on a toothpick, appropriate medication may be safely carried to the upper pharynx. Even the old familiar goose grease will yield marvellous results.

In all colds in children remember first of all to keep the nasal passages clear. Better than a knowledge of expectorants is familiarity with the use of heat and cold. Both are potent remedies and are worthy of care-

ful study. As to medication after thorough cleansing the intestinal tract, aconite with me holds first place in acute disorders. Some one has said the public estimates a physician's worth by the number of cures he makes; but physicians gauge the merit of each other by the accuracy of their diagnosis.

Generally speaking a physician need not be told the proper line of treatment when a correct diagnosis is made. A good diagnostician is generally a good physician, because he works with the rifle and not with the shot gun. He shoots in the broad daylight of knowledge and not in the twilight of guesswork.

A physician's position in this great human machine called society is a most responsible one. He is veritably a priest of a flock. Upon him devolves the health and happiness of the human being entrusted to his care. It is his duty, backed by his Hippocratic oath, to bring to his daily task the fruition of modern therapy as far as may be in his power. But in his search after knowledge let him not forget that the microscope does not always show the cause of human suffering. Treat the patient and not the disease, nor be deterred by the absence of high priced clinical apparatus. Men have died and worms have eaten them who yielded up their blood to the microscope, and had their phagocytes and leucocytes numbered and assorted.

Remember that a sincere sympathetic interest is often more precious than a knowledge of bacilli. The truth, the whole truth should be our motto and our aim. More than that we cannot compass; with nothing less should we be satisfied.

Hemorrhoids.

By H. T. Bass, M.D., Tarboro, N. C.

Hemorrhoids, or piles, is the most ancient disease we have any record of, and, in the range of surgical pathology, no other class of diseases is so prevalent among the civilized communities, causes more suffering, and produces so many varied reflex symptoms, as hemorrhoids, or, rather, diseases of the rectum, including the anus. This is due to their anatomical structure, physiological function in the great economy of nature, and their relation to important organs in close position to them.

The first record we have of the disease is recorded by Moses when he threatens his

people for disobedience, Deut., ch. 28, v. 27, which reads thus: "The Lord will smite thee with the botch of Egypt, and with the emerods," etc. The Greeks many centuries afterwards called this disease hemorrhoids. In 1 Sam., ch. 5, v. 9, we find, "and he smote the men of the city both small and great, and they had emerods in their secret parts." In Psalm 78, v. 66, we read, "And he smote his enemies in the hinder parts," and to this day, in ancient or modern times, the punishment has not been improved upon, so far as unfitting one for active exercise and general usefulness. And there is no disease that one, either from mistaken modesty or procrastination, will hold on to longer, hoping that nature or some home remedy or patent medicine will cure. I have known several whose business, health, home and temper were ruined because they would not be cured of their hemorrhoids, fearing the knife and anæsthetic.

The term "Hemorrhoid," which means a "flow of blood," is not just the correct term, and was coined by the Greeks to mean "an active flow of blood," a flux, a hemorrhage, coming from the rectal veins, Garland interpreted the term to mean a passive hemorrhage. At the present time, most authors make the term mean tumors resulting from the enlargement of the veins of the rectum, whether they bleed or not, and most patients speaks of them as "piles." They are both misleading, and yet, they are terms which have been in use so long that it is not well to change. The average patient calls everything that bothers him about the rectum piles, and that is why we inspect and examine with eye and finger every case that comes to us; the patient generally thinks what will cure one will cure all. They do not take into consideration the cause and effect. I do not propose to recite the anatomy of the rectum, but will call attention to its gross construction.

The rectum is composed of mucous, muscular, and peritoneal coats, with their connective tissue, and is supplied with blood through three arteries—the superior, middle, and inferior hemorrhoidal, coming off from their respective larger and more important arteries supplying their respective parts of the rectum, and discharge its blood through veins of the same names, made up from the same general distribution, the middle and inferior coming from the anal region, and emptying into the internal iliac. The superior is made up from the hemorrhoidal plexus in the lower part of the rectum proper, running under the mucous membrane for three or four inches, then

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through the muscular coat to the outer side of the gut into the portal system. It derives its nervous supply from both the cerebro-spinal, the system of animal life, and the sympathetic system, the system of organic life. The former are from the sacral plexus, and the latter from the mesenteric and hypogastric plexi. I will not, in a paper of this kind, go further into the distribution of the various branches of these nerves, but we can well understand how hemorrhoids will give the varied symptoms we so often see in our patients, from a pain in the head down the spine, to a pain in the heel. The middle and upper part of the rectum are much less sensitive than the lower, as has been shown by Bodenhamer, and illustrated by every one who has treated hemorrhoids by injecting them. The pain increases the nearer the anus is approached; hence, one may have quite extensive hemorrhoidal trouble high up in the rectum beyond the anus, and have very little pain, while very small hemorrhoids in the anal region will produce excruciating pain and varied reflex symptoms.

The muscles of the rectum or anus are two, the external and internal sphincters, which I only name without describing. They play an important part in the treatment of hemorrhoids on account of their position, and the power we have to use, to dilate and contract them.

The symptoms of hemorrhoids vary from a slight discomfort to an intense pain. In getting the history from the patient we should learn if the pain or discomfort is constant, dull or sharp in character, if low down in the anus, or high up in the rectum; and many other questions may be asked as they suggest themselves, or we might confound the trouble with fissures, ulcers and morbid growths of the parts, which will be cleared up by inspection and an examination with the finger in the rectum. Patients, as a rule, call every trouble about the rectum piles. I have had them to come with warts, eczema, fissures, ulcers, cancer, and various other troubles, yet, they will say they have piles; therefore, we don't take their word, but make an examination with eye and finger.

Hemorrhoids are divided into two classes, external and internal. This classification is based on pathological facts, and their anatomical relation to the anus, or sphincter, muscles. External hemorrhoids are those external to the sphincter muscles and anus, and are covered, or partly so, with skin, while internal hemorrhoids are covered entirely with mucous membrane. It often happens, owing to their size, that internal hemorrhoids will protrude in the act of

defecation, or when the sphincters are much relaxed, but they are internal hemorrhoids proper, for they are covered with mucous membrane, and they can be replaced and will remain within the rectum for a time, if the patient is quiet. External hemorrhoids cannot be introduced into the rectum; they are covered with skin, and furthermore, one is the result of a ruptured vein, and the formation of a clot of thrombus and has a purple tint and irregular surface, while the internal hemorrhoids are the result of dilated veins or capillaries, have a smooth, shining surface, and are red in color.

The causes of hemorrhoids are numerous. I will not mention all of them enumerated in the books on the subject, but no doubt the anatomy, the erect position, the occupation and habits of man, are the principal causes, because they are confined to no class; the rich and the poor, the high and the low, the humble and the arrogant, are all affected alike. Man is the only animal that is afflicted with hemorrhoids.

External hemorrhoids are divided into two classes, thrombic and cutaneous; really, they are one, as the cutaneous results from repeated attacks of the thrombic.

The internal are divided into two classes also, the capillary and the venous, with more show of reason for the classification. The capillary tumors are smaller than the venous, spongy in texture, are formed by the superficial vessels of the mucous membrane, and resemble somewhat strawberries. They may be alone or present with the venous variety. They rarely protrude and scarcely ever give pain, but always bleed. The venous variety are found more frequently than the capillary; they are larger and vary in size from one half an inch to an inch or more across their base, are covered with mucous membrane, have a glistening appearance, are of a bluish, or livid, color, and are formed by the veins in the sub-mucous tissue.

The earliest recorded requirement for the relief of hemorrhoids was a "gold cure" and is found in 1 Samuel, ch. 6, v. 4. When the Philistines asked what they were to do to cure their affliction, they were told, "return the ark and a tresspass offering five golden emerods, and five golden mice," etc., and to this day patients are willing to pay liberally of their gold for relief.

In the treatment of hemorrhoids we must take into consideration the kind we are to treat, the condition of the patient, and the cause, or we do not get the best results. There is no mode of treatment adapted to every case that presents itself. There are

various modes of treatment and each mode has its advocates; but he who adopts one mode for the treatment of all cases makes a mistake. The treatment of hemorrhoids should be both palliative and operative; the latter should always be done unless the patient refuses. In treating external hemorrhoids we use anything to palliate the pain and subdue the inflammation, such as rest in bed, with hot or cold to the parts, as is most agreeable to the patient. Any of the following are good: sage tea, lead water and laudanum followed by some bland antiseptic ointment such as, Rx. Ext. Belladonna 10 to 20 grs. Menthol 10 to 20 grs., Petrolat 1 oz., or Rx. Hyd. Chlo. Mit. ldr., Petrolat. 1 oz. Rx. Aristol. $\frac{1}{2}$ dr. Petrolat. 1 oz. Rx. Acetanilid 3i. Petrolat 1 oz. If the secretions of the liver and glands are bad we should give calomel followed by Mag. Sulph. or some alkaline cathartic as the patient or physician may select. If the patient will submit to the operation, we open the thrombic hemorrhoid and let out the clots, after bathing the parts with soap and water and sponging it with 1 to 4000 bichloride, or some antiseptic wash selected by the physician, and touch the cut surface with some astringent; then place a small piece of antiseptic gauze in the cut to prevent primary union and refilling of the vein; place over that a pad of cotton and gauze held in place by a T-bandage.

The treatment of the cutaneous differs only in excision and incision. The treatment of internal hemorrhoids is conducted very much as that laid down for treatment of external hemorrhoids, so far as the palliative treatment goes. We reduce the inflammation as fast as we can by the application of hot or cold packs or poultices, as may be most grateful to the patient. We allay the pain by the application of anodyne lotions and ointments. I find the following very useful in many cases; it is both an anodyne and a disinfectant. "Menthol ldr., Acid Carbol. 1 dr., Simple cerate 2 oz., Ol. Sweet Almonds 1 oz., Pul. Zinc Ox. 2 drs. I apply this morning, noon and night with a hemorrhoid pipe, and oftener if the bowels should move, and where the hemorrhoids are small with general congestion, I use the following: "Rx. F. E. Hamamelis 2 oz., F. E. Ergot 2 $\frac{1}{2}$ drs., F. E. Hydrastis 2 $\frac{1}{2}$ 3i., Tinct. Benzo. Comp. 2 $\frac{1}{2}$ 3i., Ol. carbol. 5 per cent. qs. 4 oz. Inject a teaspoonful in the rectum with a small syringe night and morning. Instruct the patient to be quiet for a short time.

There are eleven to fourteen modes of treatment laid down by some books for the radical cure of internal hemorrhoids.

Among them are the ligature, clamp and cautery, excision, and the injection process. All modes of operating have their advocates and they are all good and proper for the proper case. The ligature had its advocates in Hippocrates and Celsus, and Rhazis, the great Arabian physician of the tenth century; also Mr. Allingham of London, and Prof. Matthews of St. Louis, of the present day. The clamp and cautery had its advocates in Mr. Cusack of Dublin, and Mr. Henry Lee of London, and later in Mr. Henry Smith of London, and Prof. Kelsey of New York City, and many others. The excision has its advocate in Mr. Whitehead of Manchester, England, who seems to be its only enthusiastic advocate as a routine practice. The injection is not popular, and it lacks the display of some of the other methods, but it has its advocates in Dr. Andrews of Chicago, and Dr. Agnew of San Francisco, who were instrumental in taking it out of the hands of quacks. Agnew says in his work on the treatment of hemorrhoids, "There are no tenable objections radically and scientifically applied which cannot be equally urged against the more heroic plans of treatment advocated and generally adopted. But there are many serious and unavoidable drawbacks inherent in the latter methods of cure which are wholly and incontrovertibly absent in the former method." Kelsey, after using it as a routine practice for a year, and treating some 200 cases, spoke very highly of the treatment. Yet, in his recent book, he speaks of the bad sequels following the treatment. He says, "While for a year I used the method almost exclusively, I now use it in only selected cases." Matthews said, in the last meeting of the Mississippi Medical Association, that no intelligent physician would use the method. Prof. J. P. Tuttle of New York City, some five or six years ago, had one of the best papers on the subject in the New York Medical Journal that I have ever seen, commending the treatment in proper cases, and in a letter to me a few weeks ago, he says, "I am of the same opinion" and "that in properly selected cases and aseptically and carefully done, it is a very useful method, and a slough should not be produced, and no accident ought to occur." Prof. S. G. Gant, in his book on diseases of the Rectum and Anus, gives the best description of the treatment I have seen, and the kind of cases to treat, and, in the proper cases, recommends it, and gives formula that he used, all containing carbolic acid. He lays down some rules to go by which one will do well to follow. "Don't inject a hemorrhoid when strangul-

ated, when inflamed, when ulcerated, when external, when within the grasp of the sphincters, and when large and hypertrophied." And when the liver is diseased from whisky or any cause for that causes those unexpected bad results. Kelsey and Mathews recommend that the patient strain them down, and then the doctor catch them with a tenaculum and pull them out and inject the acid; then put them back. That is a big mistake; you can never replace them properly after they are once injected. I never inject a hemorrhoid on the outside, nor when I cannot get it above the sphincters. This was the cause of Drs. Kelsey's and Mathews' bad results.

I use either $12\frac{1}{2}\%$, or $33\frac{3}{4}\%$, of carbolic acid in equal parts of water and glycerine, injecting eight or ten drops of the former, and four to six drops of the stronger, injecting one hemorrhoid at the time, with a hyperdermic syringe with a long needle, through a cylindrical speculum with a piston and slide. You introduce the speculum with the piston in position, above the sphincters, remove the piston, and then withdraw the slide gradually until the hemorrhoid drops down in the slot; you will recognize it by the color, and then you inject the solution drop by drop until you slightly turn the color of the hemorrhoid a little pale. The treatment is entitled to a position in surgery, and ought not to be relegated back to the quack, as such expressions as those used by Mathews is calculated to do.

I have treated fifty-three cases during the last fifteen years, and have averaged six injections to the case, and I have had only three hemorrhages and not a single abscess. Seventy-five per cent. were cured and all relieved. The average length of time under treatment is about three weeks.

Mr. P. Called on me for treatment for hemorrhoids; he said he would not take an anaesthetic, nor would he be cut or tied, as he expressed it. He said he could not walk a space without his hemorrhoids coming down. Upon examination I found a large sub-mucous hemorrhoid protruding, and the sphincters very much relaxed. I replaced the hemorrhoid above the sphincters, injected six drops of a $33\frac{3}{4}\%$ solution, and requested him to be quiet until next morning, which he did, and the hemorrhoid never protruded again. I treated that hemorrhoid three times at three days intervals, and the patient was under observation for five years and did not have a return.

Mr. J. came to me for treatment; said he had heard that I could treat hemorrhoids without cutting or tying them, and at the

same time let him be about his business. I examined him; found two hemorrhoids protruding. I introduced them into the rectum, but could not place them above the sphincters completely as they were situated partly within the sphincters, but as he would not submit to any other treatment, and I was anxious to treat him, I injected both of the hemorrhoids at once. Soon his bowels had to move, and the hemorrhoids protruded and could not be placed back owing to the swelling—they were strangulated. The patient was in bed for a week before the inflammation subsided. Some weeks afterwards I treated that patient again, and three days afterwards he had a hemorrhage, and afterwards he would not allow me to treat him again. He suffered pain after each injection. This patient drank whiskey and had a bad liver and full capillaries.

Mr. B., a farmer, aged 55, came for treatment. I found internal sub-mucous venous hemorrhoids of long standing. He said he could not keep his hemorrhoids up and that he had to replace at the end of each row. I found a hemorrhoid protruding which I could replace beyond the muscles. I injected it and sent him home, six miles in the country. He returned within three days; said his hemorrhoid had not been out since he left; that he had kept his bowels open with warm sage tea. I found the hemorrhoid much reduced, and treated it again. He returned within a week, and I found the hemorrhoid reduced to a rudiment of a hemorrhoid with no inflammation in it. He did not stop his farm work during the treatment and said he had no pain to bother him.

I was called to see Mr. G., I found him suffering with internal capillary hemorrhoids that bled freely when the bowels moved. He said he had suffered for a long time, and had lost so much blood that he could not be about. I found one of the hemorrhoids ulcerated, and it must have bled freely when the bowels moved, as he said, and judging from the appearance of the man. I injected that one, and put him to bed for twelve hours, had him to move his bowels with an enema of sage tea. His hemorrhoid did not protrude nor did he have any hemorrhage. He had very little pain from the treatment. He was under treatment for two months before he was cured of all his hemorrhoids. He says that I have added ten years to his life. I have had these cases under observation for ten years.

I cite these cases because I think they illustrate the kind of cases that can be

injected, and those that should not be injected.

If we are to get the best results, we should treat the general proctitis that accompany all hemorrhoids. It takes a longer time to cure with this treatment in many cases than it does with the clamp and cautery or ligature, but the patient can be up and about his business at the time he is being treated, and that is quite a consideration with many. Often, after the patient gets comfortable, he quits the treatment before he is well, and is often troubled with hemorrhoids again as a result. I try to oblige them to continue until I discharge them. We can cure many cases by injection that will not submit to any other treatment.

I have operated with the clamp and cautery and ligature often, and those cases have not been more satisfactory than those treated with the injection method.

Emergencies in Obstetrics.*

By A. G. Carr, M.D., Durham, N. C.

Having been requested by the Chairman of Obstetrics and Gynecology to read a paper on Obstetrical Emergencies, I offer the following. You will notice in the first place that any paper on obstetrical emergencies must, of necessity, be a *pregnant* one; and, secondly, must be suggestive of instantaneous action on the part of the accoucheur. We must be prompt in the application of our remedies, for time is precious. Here we have no case of chronic sore leg with protracted skin ulceration which has been treated by many of our brethren as well as ourselves, and still it refuses to heal. It is no case of carcinoma of the mammæ which we have watched for weeks and months in order to be certain of our diagnosis before proposing an operation. We have no time to call a consultation of our confreres and hear arguments pro and con, and then set a day for operation. There is no chronicity about it, and of all things it is most acute. Our patient may be doing very well, indeed, when suddenly there is a thunder-clapp in a clear sky. Something alarming has happened; an unexpected event has occurred and a pressing necessity springs upon us. No time for consultation; no time to look up the event in our text-books. Disease, weakness, exhaustion and death are now doing fierce battle for the life of our patient. Friends stand around us weeping and wringing their hands and appeal to us in

heart-wringing words. While we may be astonished at the sudden change for the worse, woe is the physician that becomes bewildered and loses his head! It may be a case of abortion, or labor at term, and we must grasp the opportunity and act immediately. It may be puerperal convulsions with all its horrors; in either case prompt action is our only remedy. I propose to draw mostly from my own practice in these cases and very little, indeed, from my text-books. Whether in abortion or labor at term, hemorrhage and convulsions are our greatest foes. The loss of blood is a loss of vital fluid. Shock is another thing to be avoided. A protracted abortion is a tedious and dangerous thing to contend with. Here the loss of blood is generally gradual, and septic poisoning easily intervenes. Many of us are what may be called *conservatives* and probably have blamed ourselves for not acting more promptly in some cases that slipped through our fingers. We allow too much blood to be lost before we see the uterus thoroughly emptied, and our patients die with exhaustion, or have a very tedious convalescence. Troublesome midwifery may be an old adage, but don't trust it too far.

A lady friend of mine was three months pregnant. She visited a distant city with her husband, returned home, after seeing the sights, with a slight uterine hemorrhage. She sent for me, and I placed her in bed with the remark that she would certainly speedily improve if she kept in bed three or four days. After enjoining secrecy on me, and promising compliance on her part, I prescribed and left her. The next day a lady friend called and was surprised to find her in bed; she rallied her for being lazy and was told that her physician had ordered her to bed. The lady friend, not knowing the real cause for my orders, told my patient not to heed what the doctors said, but to get up and go with her to church. Reluctantly she consented. She returned from church, took her dinner and was suddenly seized with an alarming hemorrhage. I was walking along the street and was called in haste, my instruments and medicine being at home in my buggy. An alarming scene presented itself. The middle of the room where the patient sat was literally deluged with blood and she lay on the bed gasping for breath, while the pallor of death played over her countenance. She was pulseless and unconscious. With no disinfection of hands I made a vaginal examination and found the os dilated and fœtus just to be reached with the finger. I seized a handkerchief that I saw in a drawer and endeavored to plug the os and thus to

*Read before the North Carolina Medical Society, at Tarboro, N. C., May, 1900.

stop the blood that was gushing like a mill-slucce from the gaping os. I tell no lie when I say that the handkerchief was literally flooded away in the outpouring of blood. I grasped the anterior and posterior lips with my fingers and held them firmly together and made abdominal pressure meantime. I sent the husband for another physician and the cook was sent to the nearest drug store. I hastily explained the situation to the doctor on his arrival and called for the placental forceps that I had especially sent to him for. Would you believe it, he handed me a small pair of mouse-toothed forceps which I laid aside in disgust and forced my hand into the uterus, and with much difficulty finally succeeded in extracting the fœtus and afterbirth, contracting the uterus and thus stopped the hemorrhage. Need I say that her life was despaired of, but she finally recovered after a tedious convalescence. Here nature would have allowed the patient to have flooded to death, and only a prompt pressure on the os and a rapid emptying of the uterus saved the woman's life. You might ask me the question why I delayed emptying the uterus and sent for another physician, and I answer that knowing she had lost so much blood I was really afraid to relax my pressure on the uterus lips and insert my hand, for fear she would flood to death. Ergot was given and ammonia inhaled to bring about consciousness. There is no medicine, there is no instrument to equal the physician's fingers, and even the whole hand in such emergencies.

I saw one lady die from shock of childbirth. She was raised in Florida, married and lived latterly in North Carolina, and was a subject of chronic malaria. She had intermittent paroxysms in her earlier pregnancy. She was delivered by my partner without much trouble, but she reacted poorly. An intelligent lady nurse inspected the parts for hemorrhage and showed us the white napkins for the reception of the lochial discharges. She lost comparatively little blood either before, during or after childbirth. I was called on account of the collapse and found feeble pulse, sighing respiration and great prostration. Ergot and all known external and internal stimuli were used and nothing availed, as she weakened and died about two hours after delivery. Again the bed, napkins and clothing were inspected and she died with a contracted uterus.

I will narrate another case of nervous shock which resulted in death. I once delivered a multipara who had been treated for some uterine disease by another physician. My first call to attend her in labor,

The labor progressed finely and she was delivered of a bouncing baby, but regret to say the child was totally blind. I sent the child from the room to the kitchen, some 30 feet away. The mother did not know the child was blind, and I prepared to inform her later. About an hour after this as I was setting by the bedside, I was hastily summoned to see a child in convulsions about a mile away. I refused to leave the house. The mother heard the pleadings of the child's father and called me into the room and begged me to attend the little patient, assuring me she never felt better in her life. To gratify both parties I yielded, but went by the kitchen and told the nurse, under no circumstances, to carry the child in the house, or to tell the mother of the blindness of the child. I had just finished prescribing for the convulsions of the child, when I heard the clattering of horses' hoofs along the road and the husband appeared calling loudly on me to hurry back to his wife. I was there as soon as horseflesh could carry me, and a horrid sight presented itself to my view. There lay my lately delivered patient in the throes of terrible convulsions, helpless, struggling and unconscious. I hastily inspected both her and the bed for hemorrhage and found none. I found the womb well contracted and only drew about half pint of normal urine. Chloroform was my only remedy and I used it sparingly. Hypodermic medication was then unknown, and she vomited anything put in her stomach. Consultation was called for and obtained, but the patient died three days later without regaining consciousness. I could not account for the death until three months later I learned that the nurse entered the room after my departure and the mother asked to see her baby. The nurse remarked that the doctor said she must not see it until his return, but that the doctors did not know everything and that she would show her the baby if she would not tell the doctor. The bargain was made and the nurse remarked that you must not get excited, honey, *as the child was as blind as a bat*, but the good Lord knew what he was doing or he would not have sent the child that way; the mother now demanded the child, which was brought into the chamber, the mother rising in bed to see it. She looked at it steadily for a moment and then with a scream and a kick and a lunge she fell back into violent convulsions from which she never recovered. Her death was due to nervous shock at the sight of the child. How else do you account for it?

Another case from private practice: A young girl became dropsical. Various home

remedies were given with no effect and the doctor (your humble servant) was sent for. After much questioning I suspected pregnancy and requested an examination. To this patient objected and the parents sided with the patient. Later I consulted with the mother and she hooted at any insinuation of pregnancy. I advised the mother to keep quiet, but did manage to feel the girl's belly through the counterpane and gown. In some way the young girl heard of my suspicions and I was called a liar and a quack. I anxiously awaited and was not astonished to be called about five months later. External examination only allowed when I applied my ear and, lo, the foetal heart was heard. I gently broke the news to patient and mother, and was about to be driven from the house, when she screamed with labor pains and I made a hasty vaginal examination, and felt the sutures of the skull, and in less than an hour there was a lusty male child born, the patient protesting even after delivery; then the patient's mother broke loose in her fury, berating her daughter and shaking her fist in her face, and calling her all sorts of foul names. For a few moments it did seem as if something had broken loose in Georgia sure enough, the patient crying, the mother berating, and I myself calling a halt and endeavoring to act as peacemaker, nothing availed until the young girl gave a scream and went into a terrible puerperal convulsion. Everything now changed, the patient's mother implored and beseeched her young daughter to forgive her, as she never would scold her more, the daughter struggling and writhing with horrible grimaces, her tongue protruding, swollen and bleeding and I with chloroform and hypo-dermic syringe endeavoring to allay the nervous storm. I succeeded, and she slept for several hours, and awoke to find the kindest and most doting mother you ever saw in your life. She recovered speedily without further medication. What caused this convulsion? Again, I say, it was due to nervous shock. Be ready for hemorrhage in pregnant cases with ergot, ammonia, strychnia, nitro-glycerin and be certain that your uterus is well emptied by using your fingers and hand even to get the information. Be ready for puerperal convulsions with chloroform, chloral, morphia and your hypo-dermic syringe is your best instrument here. Be ready for septic poisoning with your uterine douche and disinfectants, your curette, your purgatives and stimulants, but keep the uterus sterile by all means. Don't be afraid to go into the uterus. Dilate it if necessary, for here is generally the focus

of infection. I am one of those who believe that all cases of puerperal infection is due to a lesion somewhere in the utero-vaginal canal. To the question as to whether I generally use vaginal douches in normal labors I answer that I do not, but I do believe that it would be better to prop our patients up in bed sooner than we do in order to drain the secretions from the posterior vaginal fornix. I believe that foul excretions often pocket there, and thus give rise to septic absorption.

As regards venesection or phlebotomy, I will say that I have bled some of my patients, and that freely, but my confidence in this measure is very limited. I never depend on it alone; chloroform, chloral and hypodermics of morphia are my main stays and generally give me satisfactory results.

One more case from private practice: A young lady friend of mine whom I had treated about ten or twelve years for typhoid fever, and who recovered after an alarmingly desperate case, married and approached her confinement. She had headaches, vertigo, œdema of lower extremities and albumen in her urine. Her symptoms increased as she approached her confinement in spite of treatment. I was examining her urine one evening just after supper in my office when several doctors entered my office and remarked that the Medical Society would meet there that evening. I showed several of them the specimen of urine, and remarked later during the session of the Society that I expected trouble at the lady's confinement. A short time after I was called to her and finding her in labor removed her to the hospital in a closed carriage. As she waited for special preparation for her room, she suddenly went into a violent puerperal convulsion. I called another physician who happened to be in the hospital and rapidly passed out and sterilized my forceps. While doing so the doctor sent me word that my patient was in a second convulsion. I rushed in and found the os about half dilated and succeeded in passing the forceps and delivering the child while my patient was in a state of unconsciousness, no chloroform being required. For several days she was excitable and nervous, but moderate doses of chloral controlled this and she went on to a rapid convalescence, her puerperal Bright rapidly disappearing. She is now again pregnant, but am glad to say that I examined her urine a week or two ago and found no trace of albumen.

Gentlemen, of course, it is not expected that I should attempt to give examples in all cases of obstetric emergencies. This

would require a book, not a paper. I would have to speak of—

Induction of premature labor.

Forceps.

Extraction in foot and breech presentation.

Version.

Craniotomy and embryotomy.

Cæsarian section.

Contracted pelves.

Abnormal sexual organs.

Abnormalities of fetus.

Placenta prævia and eclampsia.

Prolapse of funis.

Puerperal fever in its multitudinous forms.

Puerperal insanity.

Phlegmasia dolens.

Diseases of the mammae, &c., &c.

Being aware of this fact, I will submit this paper from cases occurring in my own practice. May my clinical experience be of benefit to you.

April, 1900.

DISCUSSION.

DR. STAMPS: There is nothing more heart-rending than these convulsions, and the paper was a most excellent one. I would like to add my testimony to the value of a drug other than that mentioned, and that is veratrum viride. Recently I had a severe case and I injected into the arm a syringe full of veratrum viride, 25 minims probably. Consciousness was restored, circulation improved and I could but feel the value. I have had other cases of the same kind. I say this because it is one of the diseases we need all the remedies we can secure. If there are any gentlemen who have not tried this remedy I would respectfully advise them to try it.

DR. H. B. WEAVER: I suppose nothing is more profitable sometimes to us and the Society than the relation of some of our personal and practical experience in such cases as Dr. Carr has referred to. I have been attempting to practice medicine for a quarter of a century and in that time I have delivered nearly 2,000 women. Two or three months ago there occurred to me one of the worst cases of postpartum hemorrhages that it has been my misfortune or fortune to attend. The husband of the wife came hurriedly and as I was preparing to depart I happened to notice on the mantel a bottle of ergotole. I put it in my pocket and made haste to the case and found the woman in labor. On the way the husband remarked his wife had been attended by a physician in an adjoining county at a previous confinement and that she wasted a great deal of blood, probably a bucketful.

The labor was normal and went on without anything to call attention until after the child was born and the delivery of the placenta came. I took the precaution to give a hypodermic of ergotole as soon as the child was born. I followed the Crede method. As the child came out there came such a rush and gush of blood as I have never seen in all my life. I still had hold of the uterus. I asked for vinegar and they had none. I asked for cotton and hurriedly made a tampon of cotton. She had now become almost moribund and I tamponed that uterus as quickly as possible with my hand until I had filled the uterus full of cotton, and then I filled the vagina full of cotton. She was still bleeding and I gave another hypodermic of ergotole, and then a hypodermic of one-twentieth of strychnine. I took out the cotton and retamponed and packed it in with all the force I thought the case would justify and for an hour and a half I held that uterus with the Crede method, and with the strychnine repeated in two hours and with hypodermic of ergotole and I believe I saved her life with the heroic quick treatment in the emergency, and I agree with Dr. Carr's idea that we should be prepared to meet any and all emergencies. Of all the cases I have ever seen that was the most fearful and alarming at the moment and but for a little self-possession I think the woman would have died.

DR. MARSH: I would like to ask Dr. Weaver if he uses the hot water intra uterine injection?

DR. WEAVER: If I have time, but I use cold water externally with towels, as cold as I can get it.

DR. MARSH: I wish to say that I have had experiences with several cases of very serious postpartum hemorrhage and it has been my fortune to be able to get hot water in my cases, all of which reacted very nicely to the intra uterine injection of hot water. I remember distinctly a case I had last year where the patient, as the doctor said, had a most profuse hemorrhage, from which she was exhausted and pulseless and almost moribund, and the treatment had no effect whatever while the tampons were being prepared. The tampons were saturated and the hemorrhage kept on through the tampons almost as freely as before. When the hot water arrived the exigency was so urgent that I frankly confess I used the water almost at a boiling point, so much so that I feared sloughing of the parts, but it controlled the hemorrhage and with the proper care the patient came around all right.

DR. WEAVER: I had some apprehensions that there might be laceration of the cervix. I used just such cotton in making

the tampons as could be gotten in the house. After removing the cotton next morning I irrigated the vagina and uterus with an antiseptic injection of hot water, and there was no laceration of any consequence to be found, but the hemorrhage must have been intra uterine. What was to be done must be done at that moment or the woman would die. The best thing I saw was the tampon. The woman would have died before I could have used hot or cold water sufficient to stop the hemorrhage.

DR. MARSH: I wish to say that I did not ask the question to make the point that the doctor's treatment was not thoroughly proper, but wished to illustrate the cases that had come under my treatment.

DR. MOREHEAD: I wish to ask Dr. Weaver if he thinks it advisable to use Crede's method in expressing the placenta when he fears postpartum hemorrhage?

DR. WEAVER: It has always worked well with me. The uterus responded and then relaxed. By proper manipulation and expression it contracted very thoroughly, but it would not be long until it would relax again.

DR. LONG: I should like to know whether the profession think it a good idea to give anything to the patient while there is anything inside the uterus.

DR. C. J. O'HAGAN: I must disagree with Dr. Weaver's tamponing the cavity of the uterus. He said his patient had the good fortune to recover, but I think the consensus of opinion is among all obstetricians that the most expeditious way to produce uterine contractions which prevent hemorrhages would be emptying the uterus, nor do I see how it was a possible thing after packing the womb with dirty cotton to produce uterine contractions. I doubt very much whether such a procedure as that would be attended with the good fortune which followed Dr. Weaver's case. There are quite a number of things for emergencies in postpartum hemorrhages. Hot water is one of the most reliable. Another thing is the injection of tincture of iodine into the uterus, which will shut it up quick. It is better to take the water solution of iodine. A little vinegar introduced is good. I wanted to be certain that Dr. Weaver had packed the uterus with cotton.

DR. WEAVER: What I said or intended to say was that I only packed the os with cotton, and packed the vagina with cotton.

DR. O'HAGAN: The tamponing of the vagina is perfectly legitimate, but I think you said you packed the uterus.

DR. MOREHEAD: I would like to ask Dr. O'Hagan how about the injection of

iodine with the flow of blood Doctor Weaver describes?

DR. WEAVER: I would like to ask Dr. O'Hagan what he would have done under the circumstances?

DR. O'HAGAN: I should have raked out the clots of blood or anything that might have caused the bleeding, used cold water, passed my hand into the cavity of the uterus and a little motion of the closed fist would have produced contractions.

DR. WEAVER: I did that and there was no benefit, and she was dying, was as good as dead.

DR. O'HAGAN: I congratulate you on the recovery.

DR. MARSH: I have had experience with a number of cases of that kind and my results have been that after the placenta was delivered if you would sit by the bedside and keep your hand on the uterus and gradually knead the uterus 5 or 10 minutes or longer that you had good results in controlling that excess of hemorrhage and in some cases I have seen where patients had more or less fever and had done quite well before, they would get along very nicely by such a simple procedure.

DR. CARR: You remember I remarked I would give mostly my own experience. I will state I have never used veratrum viride in labor. Hemorrhage may occur at any time in labor. The first hour or two it may be more usually expected, but cases are reported where it occurred 11 days afterwards. Hot water is not always available. I have been advised by an old friend of mine who delivered a good many cases to try ergot through the vagina by means of a syringe. It is much better than by the mouth. He says the uterus will snap it up like a fish after a fly. Old Dr. Meigs use to say never tampon in labor cases, but we are smarter than Dr. Meigs was. We do not fear intra uterine work as he did. Of course, intra uterine treatment is a procedure I would not advise any man to try first, but intra uterine treatment in cases of postpartum hemorrhage is feasible and practicable and is right when you have tried other remedies. Pack your uterus with absorbent gauze or anything that is septic, that is perfectly feasible.

DR. STANTON: I want to advocate the use of the tincture of veratrum viride. It has been my fortune or misfortune to contend with an unusual number of puerperal convulsions, having had these cases in rapid succession, covering a few months. In the management of these cases I was thrown on veratrum viride as my only resource except the lancet, and the first case was an anæmic lady who would not bear the lan-

cet. I used veratrum viride in 10 drop doses hypodermically. I have resorted to veratrum entirely unless in the first convulsions. I experimented until I used as high as 25 drops in one and one-half hours. Never after I brought the pulse to 60 a minute did I have any convulsions, and in every instance it proved sufficient.

DR. SUMERELL: I wish to endorse the remarks of the gentleman who has just taken his seat. I have as much confidence in the use of veratrum viridi in convulsions as in quinine in malaria and his experience coincides with my own. If I had pulse 100 to 120 and I bring the pulse to 60 I am as sure of the convulsions ceasing as I am of anything according to a human being after the administration of any drug, and I think veratrum viride is one of the surest drugs for a physician when he approaches the obstetrical chamber.

DR. CARR: Does it produce nausea in this dose, Doctor?

DR. SUMERELL: I have had it to produce nausea only once.

DR. CARR: How does it stop the convulsions; what is the physiological action?

DR. SUMERELL: If Dr. Carr will tell me what is the distinct pathology of puerperal convulsions then I will try and give him the physiological action of this drug.

DR. CARR: I thought everybody knew puerperal convulsions had different causes, extreme nervousness, Bright's disease. I want to know the effect of veratrum viride. Does it correct nervousness or cause vomiting or what?

DR. SUMERELL: My idea is that under certain conditions there is a toxin and that toxin poisons the circulation of the brain or the whole nervous system, that the convulsion is probably due to an excitement of the whole nervous system by this toxin being thrown in much larger quantities on the nervous system and the action of veratrum is in slowing the circulation and thereby reducing the quantity of toxin thrown on the nervous system. That is purely theory, and the only theory that I have that comes anywhere near satisfying me about veratrum viride.

DR. CARR: I am not opposed to veratrum viride, but I have never had much experience with it. I am glad, however, that I have another remedy. But it is no use to say the patient gets well and not know how the medicine effects him. I have given many a dose of medicine when I did not know what was the matter with the patient and he would get well.

DR. McMULLAN: I consider veratrum viride one of the best remedies, but I do not rely on it exclusively. My remedy is atro-

pia, veratrum viride and morphine. I have been taught that in puerperal convulsions there was affectionation of the brain due to the spasm of the capillary circulation and whenever a woman had a puerperal convulsion, veratrum viridi would dilate the peripheral circulation, and hence its effect.

DR. JULIAN: I think, sir, that the majority of cases of puerperal convulsions would die without the proper remedies. I think all the cases would die without the proper remedies, and my experience is that veratrum viride has the same effect as bleeding. I cannot agree with Dr. Sumerell that it destroys toxin, but it lowers blood pressure and I think it preferable to bleeding. It relieves congestion of the brain.

DR. SUMERELL: I certainly did not say that veratrum viride destroyed toxin in the blood. What I wanted to convey was this: that it prevented the rapid carriage of those toxins to the nervous center, that was the idea.

DR. CARR: I wish to say in closing that I am glad that these gentlemen speak so highly of veratrum viride and I am much obliged to Dr. McMullan for his explanation, which is probably the correct one. I was trying to get at that. In future I will give it a trial when I cannot relieve with chloral, chloroform and hypodermic of morphine, which I have always done.

Hypertrophy of the Pharyngeal Tonsil and its Treatment.*

By J. T. J. Battle, M.D., Greensboro, N. C.

This tonsil is also known as Adenomata, Luschka's, or Third tonsil, post-nasal growths and Adenoid Vegetations.

This is principally a disease of childhood, generally appearing before the tenth year is reached. Heredity has a very significant bearing and is an important factor as to the causation of these growths. Dr. Mockie, of Nottingham, says that "I scarcely see a case of adenoids say in a child but where there is an arthritic or migrainous parentage."

The lymphatic diathesis in which the lymphoid glands are so very susceptible to inflammation and enlargement are undoubtedly transmitted from parent to child. This tonsil develops very rapidly during the early years, is easily irritated and every attack of congestion from whatever cause leaves it larger than it was previous to the attack.

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As lymphatic glandular tissue has exceedingly poor recuperative powers, it fails to regain its former healthy condition, and hence is not only hypertrophied to a certain extent, but is more vascular and the readier to catch and absorb any germ which may come in contact with it. Diphtheria, the exanthemata, repeated attacks of coryza on any disease which may bring on congestion of the pharynx is responsible for an increase in its size. A child with this gland enlarged is decidedly more liable to contract the contagious and infectious diseases, and in diphtheria it makes the treatment much more difficult. The gland is composed of lymphoid follicles and adenoid tissue and in the youngest the growth is generally soft, yielding and very vascular owing to the preponderance of the lymphoid tissue, while in older children it is harder and more fibrous as the stroma is more developed. It varies in size from a pea to peach kernel, it may be pedunculated or have a broad base.

One of the most prominent symptoms in a typical case is the open mouth, and upon closer inspection it is noticed that the normal lines of expression are absent from the face, there is often and in some cases constantly asero-mucous or muco-purulent discharge from the nose, the eyes may be prominent, the base of the nose is broader than normal, this condition makes the little sufferer appear simple, and if not relieved it not only appears so, but is actually dull and stupid, and is inclined to stay in doors and is devoid of animation, is absent-minded and inattentive, which may be due to defective hearing or dullness.

There is a rhino-pharyngeal catarrh, and there is considerable difficulty for the patient to blow the nose owing to the growth almost entirely closing the posterior nasal apertures. Deafness is a frequent symptom and may be caused by an extension of the inflammation into the eustachian tubes causing an otitis, or the opening of the tube or tubes may be encroached upon and closed by the enlarged gland, thereby causing a difference in the density of the air on the two sides of the tympanum, or a retraction of the tympanum, or the opening may be closed by mucus, causing periodical difficulty in hearing. Hypertrophic rhinitis is often present and treatment for this is generally unsuccessful unless the tonsil is first removed. The voice is nasal in character, resonance is diminished, occasionally hoarseness exists, impediment in speech sometimes follows. If the enlargement is sufficient to close the vocal chambers it is impossible to train the voice, words with certain letters are not accurately pronounced.

The shape of the vault is considerably altered, it is narrowed and elevated and in consequence the septum is encroached upon, it is then forced to bend to one or the other side, and we have the deviated septum. Sleep is not sound and refreshing as it should be, but is disturbed by dreams and nightmares at times, often awakes in a scream, breathing is irregular and snoring, and the child throws itself about the crib and assumes various positions, often lying on the face evidently to drain the mucus from the throat or trachea so that breathing may be easier. Imperfect rest affects the general health and the nervous system especially. Pulse may be irregular, palpitation is at times troublesome. Enuresis may be relieved by removal of the tonsil, also cases of chorea being cured have been recorded. Dentition is delayed. As the babe can breathe only through the mouth, its manner of nursing is characteristic, the nipple must be turned loose every few moments. Asthma which causes the deformity which is called the "barrel chest" is or may be due to this troublesome gland. Pigeon breast may also be caused by the prolonged interference with normal respiration.

With several of the foregoing symptoms we are justified in making a more thorough examination, rhinoscopy with the average child is exceedingly difficult and if not impossible is altogether unnecessary, as a digital examination is easily made and the diagnosis is settled. The way I have found most satisfactory is for the child if not old enough to stand up, is to have it sitting on the nurse's lap, and she is asked to hold the patient's hands, if the child is several years old I have it to stand up. Standing by the patient I draw its head against me, my left arm around its neck and hand on left jaw, the mouth is then opened if not voluntarily by the patient a little manipulation by the physician will accomplish the object, the index finger of left hand then presses the jaw between the gums or teeth, and that is an efficient gag and is not repulsive to patient or parent, with the child's hands under control by nurse, the index finger of right hand is carried through the mouth up behind the palate and against the pharyngeal wall. If the tonsil is abnormal a soft or rather hard mass, owing to age of child, if felt and it feels something like a roll of earth worms, and the space between palate and pharyngeal wall is almost occluded, and the finger on being withdrawn is generally bloody. As to treatment, washes, sprays, gargles or caustics are very unsatisfactory, but extirpation gives prompt and the wanted relief. To operate I prefer to

have the patient lying on the back on a padded table, with the head lower than the body and low enough to keep the blood from running down into the trachea, the anæsthetic is administered, mouth gag in position, and a reliable assistant to steady the head, with a Gottstein's curette passed well up in the vault of the pharynx, the handle is raised up against the upper front teeth, then a firm downward movement generally brings most of the enlargement away, with two or three such movements the hypertrophied tissue is all removed, the finger is passed in to find out if any remains, if so it can be scraped away with finger nails or if unyielding the curette can be reintroduced and the work completed. The openings of the eustachian tubes must be remembered and not injured. See that none of the growth is left hanging in the throat by the pharyngeal membrane being intact, the patient is now turned on side for the blood to flow out of mouth and nose. I have always used chloroform as the anæsthetic, pushed only to the second stage as in this stage the reflexes are not abolished and if any blood should get into the trachea it will be coughed up. Ether causes too much frothy mucus to be secreted and encourages hemorrhage. Ethyl bromide and nitrous oxide are highly recommended and if the oval tonsils do not have to be removed I think would be preferable to chloroform.

Any after treatment for the pharynx is unnecessary, but a simple antiseptic solution as spray or gargle can be used if desired.

DISCUSSION.

DR. J. C. WALTON.—I want to thank Dr. Battle for his most excellent paper. This subject is one that physicians do not pay enough attention to. We see a child with a cough and a pigeon breast, remove the adenoids and it makes a new being of him altogether. His lungs expand and he becomes a healthy vigorous child. The operation is done in a few moments with little pain and really I think in the majority of cases it is not necessary to use an anæsthetic. When an anæsthetic is given there is little danger as the duration of the operation is so short. I think there is no operation in surgery that gives more brilliant and satisfactory results, and the nose is one of the most important respiratory organs of the body because the air is fitted for the lungs by passing through the nose.

DR. W. C. GALLOWAY.—I think Dr. Battle has very largely covered the ground in this matter. Beside the curette I wish to mention the use of an instrument for cut-

ting the growth away. To me it is quicker and I am fond of using it and like it, and it gives no more pain with just a little cocaine, and I saw an operation of that kind a few days ago with a little boy 4 or 5 years old, without any chloroform, with happy results, with just a small amount of cocaine. I am in the habit of using chloroform with small patients. We southern physicians are largely given to chloroform, and I usually use the curette, and as Dr. Walton has said we do get very happy and brilliant results from it. I do not look on the operation as being a hard one, most any general physician can perform the operation successfully and very nicely. I have never seen any danger from it. When you give chloroform to children they frequently stand it better than grown people, and I have no fear on that line. When we go on a thing of that kind and do not have any fears about the results we generally succeed more handsomely than we would otherwise. I have performed the operation a great many times in Wilmington and in a variety of patients. I always follow the operation up with taking out the tonsils.

DR. BATTLE.—I will add that I have confined myself to pharyngeal tonsils; in the great majority of cases the lingual tonsils are also enlarged.

Chronic Cystitis.*

By J. H. Marsh, M.D., Fayetteville, N. C.

Complete and exhaustive discourses on the cause, symptoms, pathology and treatment of chronic inflammation of the urinary bladder are found in the standard works of surgery, and it is not the object of this writer to go into a lengthy discussion of established scientific facts; but if by refreshing the minds of the profession with some of the more important causes and pathological conditions met with in this disease and the practical use of the therapeutic agents at our command for curing or alleviating this class of suffering humanity, a free and full discussion of this important subject is elicited from this society, the object of this paper will have been accomplished.

Chronic cystitis or crystorrhœa is an inordinate secretion of white, glairy mucus, essentially dependent upon chronic inflammation of the lining membrane of the organ. It is analagous in its character to gleet, leucorrhœa and kindred affections, and is merely a symptom of a more serious disease. It is most common in elderly sub-

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jects and is nearly always due to some obstacle to the evacuation of the urine, as stricture of the urethra, vesical calculus, enlarged prostate glands, paralysis of the bladder, sepsis, etc. It is a constant attendant upon sacculation, ulceration, hypertrophy and morbid growths of the organ. Once established it is easily aggravated, or reinduced by exposure to cold, excesses in diet, irritating injections, diuretics, over distention of the bladder, neuralgia, retrocession of gout, repulsion of cutaneous eruptions, local injury, and diseases of the adjoining parts; as the anus, rectum, vagina and uterus.

The disease generally comes on in a slow gradual and insidious manner, the inflammation which accompanies it, and which is always the immediate cause of the peculiar discharge, is always of a chronic character. The characteristic symptoms are an inordinate secretion of mucus, and altered condition of urine, frequent and difficult micturition, pain in the region of the affected organ as well as in the adjoining parts, and more or less constitutional derangement. The quantity of mucus mixed with the urine varies considerably in different cases and in different conditions. In mild cases and in the incipency it is usually very small. At a more advanced period it is sometimes enormous, constituting as much as four-fifths of the entire volume. The secretion is usually very thick, ropy and viscid, and after standing sometime it adheres to the bottom of the receiver. During the progress of the disease the urine becomes highly acrid, so that the bladder can hardly tolerate its presence, even for a few minutes. It generally emits an ammoniacal odor; is of a dirty, turbid or blackish color; is rapidly decomposed, and is nearly always mixed with epithelial, fibrinous, purulent and phosphatic matter. Renal casts are nearly always present, when it is accompanied with serious involvement of the kidneys. Pus may proceed from various sources as the bladder, ureters, prostate gland, or even the kidneys, which are often sadly involved in the mischief. Its presence is always regarded with great attention, as it indicates serious disease of the organs from which it proceeds. The discharge which accompanies this disorder may be mistaken for semen, or mixed with semen, when this flows back in the bladder, and mixes with the urine, as in stricture or enlargement of the prostate gland. If any doubt exists this can readily be solved by the microscope.

The prognosis varies with many circumstances as the cause, duration of the dis-

ease, the age and constitution of the patient, etc. In its incipient state it is sometimes not difficult to cure; but when it has come to disorder the whole system, the prognosis is more unfavorable. Sometimes the walls of the bladder are ulcerated and thickened to five or ten times their natural thickness and the kidneys, ureters, and prostate gland are implicated to a fatal extent.

In the treatment of this affection it is of the greatest importance to ascertain the nature of the exciting cause. Stricture of the urethra must be removed, stone in the bladder extracted, hypertrophy of the prostate gland, and diseases of the neighboring or associated organs mitigated, before any reasonable hope can be indulged of a permanent cure. The patient should be put to bed and kept perfectly quiet and a general antiphlogistic course of treatment instituted, even if there be no marked constitutional disturbance. The bowels should be opened with saline cathartic, enemata, and if the secretions are disordered, with calomel and jalap. All medicines tending to irritate the rectum, such as aloes, etc., should be avoided. The most perfect quietude, both of body and mind, should be enjoined. The diet should be light and bland, consisting largely of milk. The demulcent drinks should be freely given. General or local bleeding is highly recommended in plethoric subjects. Warm baths and hot fomentions are very useful. When by these means the violence of the disease has been subdued then comes the long list of internal remedies, such as balsam copaiba, buchu, uva-ursi and the terebinthinate preparations. In acid conditions of the urine an alkaline treatment is always indicated; while in alkaline states of the urine, acids are to be given. Opiates, hyoscyamus, etc., are indicated for the relief of pain. In gouty and rheumatic subjects, colchicum and the iodides are extolled, and iron for anæmia. Benzoic acid has been recommended as sometimes affording relief when every thing else fails. Salol has been used a great deal within the last ten years as an antiseptic and with good results in many cases. These agents with many others, have been used by the profession with more or less success and all have their advantages in certain cases. I do not wish to detract from the virtues of any of the time-honored remedies which have held their place for so long a time as standard therapeutic agencies for this dread disease; but I ask a discriminate use of them when only they relieve, and not the blind and mechanical use of any class of remedies in all cases of this disease as is the custom at

present with so many members of the profession.

I wish further to call your attention to the local treatment of this affliction and to emphasize its importance, and to insist on its more general use by the profession at large as the most rational, and I believe, scientific treatment for chronic cystitis, and the only treatment that will give satisfactory results in the great majority of cases. Irrigation of the bladder should always be done under the most absolute antiseptic precaution, and no air allowed to enter the organ. And at the same time attention should be paid to the general health as above indicated. The frequent irrigation of the bladder, which can always be accomplished, if carefully used, with a soft rubber catheter and an ordinary syringe with boiled water or antiseptic solution composed of nitrate of silver 1-2 to 2 per cent. or stronger; permanganate of potassium 1-2 to 4 per cent.; boric acid 2 to 10 per cent.; creolin from 1 to 5 per cent.; corrosive sublimate 1 to 20,000 to 1 to 5,000; carbolic acid 1 to 500 to 1 to 250, and many others belonging to the same class of antiseptics. The effects of silver injections are sometimes marvelous, though somewhat painful if used in strong solution. While carbolic acid makes a very soothing and pleasant wash in a number of cases where other remedies produce irritation. In cases which fail to yield to these methods of treatment and in which urination and painful tenesmus are prominent symptoms and are accompanied by a gradual failure of the general health, a perineal cystotomy followed by permanent drainage, will often be required and give marked relief and occasionally result in an entire cure. The importance of a systematic course of treatment in every case should be carefully observed; and if given a thorough trial, it will take its place as the first and most important means of relieving this class of suffering humanity. To illustrate. I will report one of the worst of a number of cases that have come under my care within the last few years. Mr. F., age 59, when a boy received a traumatic stricture from a fall a straddle the sleeper of a house, from the effects of which he suffered several years. After this time he got along very well until fourteen years ago, when the cystitis set up again and with the best of medical treatment, he grew worse until the fall of 1887, when an external urethrotomy was performed by Prof. S. W. Gross, he being unable to pass a filiform bougie at the time he operated. Patient got along nicely for several years by passing a No. 16 or 17 bougie once a week, but suffered more or

less from spasm in urinating, most of the time. He began at this time to suffer again, with the inflammation for which a thorough course of internal treatment was given, consisting of balsam copaiba, buchu, etc., which was kept up until two years ago, when he came under my care. At this time the discharge was almost entirely composed of mucus, etc., and he could not retain his urine more than five to ten minutes at a time, and had no control of his bowels at all, unless under the influence of an opiate. At this time he presented all the local symptoms of a very bad, chronic cystitis, without fever or other marked constitutional symptoms.

Additional to constitutional treatment I began to irrigate the bladder with silver solution, grains 1 to 2 to the ounce twice a week, and in the meantime used warmed boric acid irrigations night and morning regular. Under this treatment he began steadily to improve, and within several weeks was able to attend to his business. With an occasional irrigation, he kept up very well until last fall. At this time he had a return of all his local symptoms with marked constitutional disturbances in addition. He presented every appearance of suffering from septic poison. His condition in every respect was much more serious than it had ever been before, and he had given up all hopes of getting up again. At this time I brought him to the hospital and began a systematic course of local treatment in addition to his constitutional treatment. His bladder was so irritated that the silver solution could not be tolerated in any strength, and the carbolic acid solution 1 to 500 was used night and morning. His urine was drawn every three or four hours. At the end of two weeks under this treatment his fever, which had ranged from 103 to 104 prior to this time, was reduced to normal and remained so throughout his illness, with one or two exceptions, when he had only a slight return for a day or two. At this time the capacity of his bladder had increased from one ounce to several and his urine had to be drawn only two or three times in twenty-four hours, and his general health was improving satisfactorily. He remained with us several weeks during which time local irrigation of the bladder was regularly kept up night and morning with carbolic solution from 1 to 500 to 1 to 250. His general health improved very rapidly and he returned home about first of last December; since that time with an occasional irrigation kept up by himself he has been attending to his business and writes me while not well, his general condition is better than it has been

for several years. While this man is not well, and never will be, I venture the assertion that he would not be alive to-day but for the local irrigation in the treatment of his chronic cystitis.

DISCUSSION.

DR. R. H. LEWIS: I would like to call the attention of the profession to the water of the Red Sulphur Springs in West Virginia. I have come to have great faith in the water and regard it as an uncommon agent in the treatment of all chronic diseases of the mucous membrane, such as diarrhea, cystitis, chronic bronchitis, etc.

DR. J. C. RODMAN: I desire to thank Dr. Marsh for his interesting paper. This is a disease of a great deal of importance to us all and I desire to say a few words as to causation.

In many cases of chronic cystitis the physician himself is at fault in the treatment of stricture, especially stricture from gonorrheal origin. I think we are not careful enough in the treatment of stricture as to irrigation and as to the sterilization of our sounds. In the hurry of office practice where we have to pass a sound once in three or four days a man may come to us and we simply pass the sound through an alcohol flame or gas jet and push in the bladder and oftentimes we ourselves are responsible for the gradual development of chronic cystitis and I wish to say a few words that we may prevent cystitis in our patients by thorough irrigation of the urethra and oftentimes of the bladder, and by sterilization of our sounds.

DR. O'HAGAN: I was in hopes that Dr. Marsh's paper would have a little more discussion in view of the fact that cystitis is a very common and also troublesome disease. I was glad to see Dr. Rodman calling attention to the fact that cystitis is often due to the carelessness of doctors. That vicious little microbe, the gonococcus, is more productive of cystitis than anything I know of and the surgical treatment adopted for the cure of gonorrhea is such as to extend the gonococcus to the bladder. And again, the clumsy treatment of that disease often leaves a stricture. Everything Dr. Rodman has said about sterilization is of very great importance and as to the treatment, I agree with Dr. Marsh, that local treatment is absolutely essential and in most cases is the only remedy we have for it. Overdrugging in various ways makes this disease worse, and if the patient suffers from stricture in the pendulous urethra this must be overcome. The fewer drugs the unhappy patient takes the better off he is, and I believe pure water and plenty of it is

one of the best things he can take, flushing out the kidneys and the bladder. The modern improvements in all the instruments connected with the treatment of genito urinary diseases enable one to accomplish much more by irrigation than he formerly could, and then disinfection and so on comes in and the vast number of disinfectants is such an embarrassment of riches as it were that we are at loss to know which to choose. Local treatment and plenty of water will produce better results than anything else. Sometimes, though, there are growths inside the bladder which necessitates surgical interference and sometimes perhaps the presence of calculus would cause all these things, all of which must be attended to before we can pay attention to the bladder. I have given these few words in discussion of this subject in as much as it is a very common disease, and will be glad to hear the men of the profession express themselves as to their treatment and their diagnosis and the etiology of the disease. The etiology, I think, is largely due to the gonococcus.

DR. M. H. FLETCHER: I think I have seen more cases of cystitis due to dirty catheters than almost anything else; especially as the doctor says in his paper, if you let air in to the bladder. I have seen often, through carelessness of the doctor or carelessness of the nurse, cystitis set up. It takes a great deal of care and a great deal of sterilization and the simple fact that you have to pass the catheter itself is going to cause trouble if it is continued any length of time. Large doses of boracic acid is one of the best remedies in the treatment of the disease internally.

DR. W. C. GALLOWAY.—It may not be entirely out of place for me to say a few words upon this topic. I will cite two cases that came under my own observation when I was in general practice. One was when a resident of Snow Hill, and I desire to allude more particularly to the female urethra. In this particular instance it was a lady who was emaciated to 110 pounds after having weighed 160. I saw the lady, examined her, and at that time I had been reading up on the Moore Madden plan of dilating the urethra. Moore Madden said at that time from one to two operations, as a rule, were sufficient. In that case I had to stretch the urethra 4 times, but with the best results. It was done under chloroform, with no one to assist me, and when I got through she said I was the meanest man she ever saw, and I reckon I was, but she was not completely under the chloroform, but she got well after the stretching, with some boracic acid and the flushing of the kidneys, and

with a little anodyne to relieve her; and in the course of 6 months the lady was perfectly well, weighing at that time 160 pounds. I was in Winston once when Dr. Bahnson came to me and said, come with me to the hospital and administer chloroform to a patient; I want to perform a supra pubic operation. I said, of course, but I have an instrument which I believe will obviate your supra pubic operation. I brought out the bi-valve instrument—I think a tri-valve is better—and showed it to the doctor and explained my manner of procedure which he deemed a good thing and concluded to try it. I gave the chloroform and he used the instrument with the most successful results.

DR. C. J. O'HAGAN.—Dilatation of the female urethra is the commonest thing in the world in as much as cystitis in the female is ten times more common than in the male. Dilatation does not always cure by any means, but always gives relief. There are a thousand ways in which you can perform that operation. You can use a cone shaped tube, metallic or made of vulcanized rubber, introduced into the urethra. I hardly ever anesthetize. It gives you time to look in and see if there are any structural changes in the bladder. It is very simple, and almost everybody does it. It is more than 50 years since it was first mentioned, it is almost ancient history. In nearly all cases it will give relief and will give room to operate. Sometimes the cystitis in females is so terribly intractable that nothing will relieve. Dr. Wylie, of New York, has frequently perforated the bladder with advantage to make an opening to the vagina, to give the bladder a physiological rest, when the condition of the urine was such as to cause fermentation. This is an interesting disease and I will be glad for you gentlemen to discuss it further.

DR. HOLMES.—In discussing the local irrigation treatment of cystitis I would like to ask if there is any gentleman present who has used a combination of aristol with euophen in liquid petroleum, and if they have I would like to know what their results were.

DR. H. H. DODSON.—Of course we all realize the fact that local treatment is the most satisfactory in chronic cystitis, but in the case of women there is a therapeutic remedy. I have gotten better results from the use of creosote than anything else. In treating tubercular cases where there was any trouble of that sort I have found invariably some improvement on the use of creosote, and therefore I was led to use it in the treatment of ordinary cases, in doses of from 5 to 15 drops 3 to 4 times a day.

DR. J. F. SANDERFORD.—I wish to voice brother Fletcher's remarks and add my testimony to his. I have gotten the best results from the internal administration of boracic acid and I have found the etiological cause in my practice to be an unclean catheter in the hands of the nurse or of the patients themselves. I have some cases on hand now due to those causes. For internal remedies boracic acid has stood me a good hand.

DR. R. A. WHITAKER.—I had a case of cystitis that reminds me very much of what Dr. Galloway calls to your attention. She was very much run down and had been suffering a long time and was confined to the bed, could not be on her feet at all. I was called to see her, but made only one visit at the time. She had been told she would have to have an operation as she was troubled with some malignant growth and I made a thorough examination and diagnosed the case: I dilated the urethra and put her on this treatment. In cystitis it has given me better results than anything else: boracic acid and benzoic acid, 3iss of boracic and ʒi. of benzoic, in 6 oz solution, tablespoonful every three hours. You will find that the alkalinity of the urine will disappear and become normal, acid reaction; and in this case I think a couple of bottles improved that woman's condition and she has never been troubled with it since, and is now a stout woman. At the time she thought she had to die. I have used this prescription in a great many cases, especially in women.

DR. H. T. BASS.—I have enjoyed Dr. Marsh's paper and I have enjoyed the remarks made by the different gentlemen, but it strikes me that none have paid enough attention to the dietary treatment. I had some sad experience in cystitis some time ago, but it was in the female. I used irrigation and think that is one of the best remedies we have, but it is very important that the irrigation be properly applied. Most of us give irrigation with too much force to the sensitive bladder. Dr. Marsh speaks of patient's bladder not bearing the smallest per cent. of nitrate of silver. I used the ordinary rubber catheter and put in as much water as the patient could bear, using very small stream. I first used normal salt solution and washed the bladder thoroughly and commenced with 2 per cent. of nitrate of silver and went to 10 per cent. before the patient was left. I examined the urine every day and it was always alkaline and full of mucus until I got to 10 per cent. solution of silver nitrate. Of course I put in as much as the patient could bear. I put my patient absolutely

on milk diet, poor milk, but not skim milk—hotel milk. She was given treatment something like a month. I think nitrate of silver the best remedy for a mucous surface. The late Dr. Pepper of Philadelphia recommended it in all mucous disturbances, and I do not think we can improve with aristol and boracic acid and benzoic acid or any of the other remedies. Of course if urine is acid I agree with Dr Lewis' experience and I have had some patients benefitted. Where you have cystitis with pus formation you are apt to have alkaline reaction. But the diet is particularly important. Meat will not do, oil will not do, but an absolute milk diet. I had a case which bothered me a good deal. Some of my friends advised her to take Warner's Safe Kidney cure. She said she would not do it unless I said so. I came back to Tarboro and took a bottle and read the label. I told her if she would go by the diet list she might take the medicine. She took it three days and said she would starve to death, so she quit Warner's Safe Kidney Cure and quit me, and I do not know what became of her.

DR. S. W. BATTLE.—Before closing the discussion of cystitis I would like to suggest a plan of irrigating the male bladder which has served me well. A simple fountain syringe adjusting the nozzle, without entering the bladder at all, just elevate the bag enough and you will find that the water will go into the bladder without any irritation of the deeper portions of the urethra at all. I have found this in two or three instances a successful way of irrigation, and if you elevate enough, unless there is stricture, you will find that the water will find its way into the bladder.

DR. J. C. WALTON.—There is one point they have not alluded to and that is rest, absolute rest, so as to give the injured organ as much time as possible to recover. As internal antiseptic I use oil of wintergreen and salol, one part of oil of wintergreen and two of salol, 15 to 20 drops three times a day. As a local treatment I have never found anything better than boracic acid. I endorse Dr. Lewis' statement as to the value of the Red Sulphur Springs in catarrhal conditions.

DR. H. T. BASS.—I have used oil of sandalwood and I recollect one patient that did not get any benefit until he took 40 drops three times a day.

DR. EVERETT.—I have sometimes in the dilatation of the female bladder given cocaine which is very good, and then the application of silver nitrate, and the

male bladder may be irrigated with increasing pressure, each time.

DR. J. B. MARSH.—I wish to thank the gentlemen, and in reply to Dr. Holmes' question in regard to the use of aristol and Europhen, by saying I have had no experience with them at all.

Hæmaturia.*

By Chas. M. Hazen, M. D., Professor of Physiology, Medical College of Virginia.

We can hardly overestimate the importance in any pathological condition, supposed or real, of the chemical and microscopical examination of the urinary discharge. We ought to know the quantity, specific gravity, percentage of normal constituents such as urea, urates, phosphates, chlorides, and the presence and amount of abnormal materials such as leucin, tyrosin, and those indicated by such terms as *albuminuria*, *glycosuria*, *oxaluria*, *chyluria*, *hematuria*.

The presence of abnormal coloring matter in the urine is calculated to attract the attention of both layman and physician; to be able to point out the source and clinical significance of such unusual appearances is of the utmost importance. The stain of methylene blue or the yellow from the administration of santonin are quite enough to terrify the uneducated patient; while the dark amber or blood-red shade may test to the utmost the diagnostic skill of the learned scientist to trace its source to, perhaps, some simple and comparatively innocent condition of disordered digestion or torpid liver, or malignant disease of some portion of the urinary tract.

Hematuria, or the discharge of blood by the urine, is a condition which is in many cases easily and definitely recognized by the naked eye. The evidence from its macroscopic appearance can be confirmed by testing for hæmic coloring matter with ozone and guaiacum; or by Heller's method by heat and alkalies, precipitating the phosphates, which are colored red by the hæmatin. The presence of albumin when other sources of albumin can be eliminated will prove the existence of blood; or if there is much excess of albumin over the hemoglobin, it may be concluded that there is kidney disease and that the diseased kidney is the source of the blood as well as of the albumin. These tests will be sufficient to

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prove the presence of hæmic coloring matter, even if the color is faint and uncertain. It is necessary to note also whether the blood comes before, with, or after the urine; likewise whether it is bright from recent bleeding, or the coffee color of retained hemorrhage. In some cases clots, larger or smaller, in lumps or cylindrical, will indicate by shape and size where they are formed, as perhaps in the ureter; and these clots may stop the discharge of blood and even of urine for a time. Palpation of kidney, and of ureter and bladder (external or through rectum or vagina) may detect tumors or tenderness; and instrumental examination of the interior of the bladder by sound or cystoscope may discover at once the cause in a stone or morbid growth; or the brilliant experiment of Kelly may be imitated, of catheterizing the ureters and demonstrating from which ureter the blood comes. It ought, however, to be distinctly noted that in a condition where the cause and locality is positively unknown we run great risk by instrumentation of the vesical interior; because it is possible thus to greatly aggravate nervous symptoms and in some vesical tumors the gentlest manipulation may bring on severe and even fatal hemorrhage.

With the microscope we search as usual for characteristic crystals, for mucus, pus, casts, epithelium, and shreds from morbid growths, and especially in these cases for blood corpuscles.

There are cases of hematuria where no corpuscles are found; this may be due to the disintegration of these elements by an alkaline urine; or the hematuria may be more strictly speaking a *hemoglobinuria*, or a *hematinuria*. These cases ought probably to be classed separately as they arise from conditions quite different from those that ordinarily cause hematuria. In order to appreciate this we need to glance over the physiology of the blood-forming and blood-destroying organs; and to recall those pathological conditions in which hemoglobin figures as a morbid product and in which the organs referred to are especially involved.

The blood is composed of the fluid portion or plasma, and of the red and white corpuscles. The red corpuscles are made up of the stroma and the contained hemoglobin. The hemoglobin is the oxygen carrier for the body; taking it up in the lungs, it enters into combination with it as oxyhemoglobin and is again disassociated from it in the tissues. The red corpuscles are formed chiefly in the red marrow of bone and have a life history of three or four weeks. Their death takes place in the

spleen and liver, and perhaps elsewhere. The complete metabolism of the red blood corpuscles is not thoroughly understood; it is built up like other tissues from elements furnished by the blood; its katabolism, or breaking-down, consists first in the separation of the hemoglobin and stroma. The proteids, of the stroma, like all proteids, are oxidized into leucin, guanin, tyrosin, &c., and perhaps later to urea or uric acid. The hemoglobin is divided into hematin and globin. The globin goes on like the stroma to urea and uric acid. The hematin gives off its iron (that precious metal, so carefully preserved by the body, and used over and over again); the rest of the hematin, known as hemato-porphyrin, becomes by hydration bilirubin, or "bile-red," the principally coloring matter of the bile; from it the other bile pigments are formed, biliverdin and bilifuscin. Confirming this view of corpuscular metabolism are the facts that no iron is found in the bile-pigments, but liver-cells are rich in iron.

We notice as the next physiological step the very interesting one that bilirubin becomes urobilin, which is the normal coloring matter of urine. Professor Maly calls urobilin *hydrobilirubin* and has shewn that it is by the simple addition of water (as this name implies) that bilirubin becomes urobilin. Harley and Scherer calls it *urohematin*, thus pointing out the ultimate connection between urinary pigment and the blood. Now this normal physiological process from hemoglobin to urobilin is analogous to the pathological facts under discussion; as that we might almost expect that, since normal blood products are in health excreted by the urine, so in diseased conditions the pathological blood waste would be thrown off in the same manner.

The diseases of which hemoglobinuria is a symptom are those in which there is some blood dyscrasia, such as infectious fevers, purpura, scurvy, malaria. The course of these diseases may be of such intense character as to cause the mucous membrane of the urinary tract to allow the extravasation of blood, just as frequently happens to the mucous membrane of the nose; so that they may be regarded as at least a rare cause of true hematuria. But more usually in these conditions the general disturbance of metabolism throughout the body and (especially in malaria) injury to the red blood corpuscles, causes a greatly increased discharge of hemoglobin. It is the toxins and in some cases the germs that produce these effects. All kinds of tissue; are involved. But the especial organ of metabolism, the liver, suffers in addition to its own burden from the abnormal character of the

blood with which it has to deal. The result to the liver and spleen is seen in their congestion and enlargement and in the altered state of the blood and secretions proceeding from them. Acute hyperemia, cirrhosis, accompanying digestive disturbances, hematogenous jaundice, uric acid effects, all point towards the liver as the organ that suffer from the diseases in question; and the lines of treatment ordinarily employed with success are partly directed to this as the department to be relieved and sustained until the elimination of the poison and the cessation of the disease.

On the basis of the above discussion of the nature of hematuria and hemoglobinuria we are prepared to classify more exactly the conditions ordinarily known as hematuria, and to glance at their logical treatment. Let us first differentiate between

(a) Hematuria due to conditions lying within the urinary tract;

(b) Hematuria, including hemoglobiuria, due to conditions outside the urinary tract.

Under (a) we may note.

(1) Traumatism to urethra, prostate gland, bladder, ureters, pelvis or substance of kidney;

(2) Injury to the mucous membrane by parasites, such as *Bilharzia Hematobia* or *Filaria sanguinis hominis*.

(3) The effect of certain drugs, as cantharides, turpentine; and of a certain articles of diet, as asparagus, strawberries;

(4) Disease: urethritis, prostatitis, cystitis, ureteral or renal inflammation;

(5) Stone in bladder or kidney;

(6) Morbid growths, benign or malignant; urethral polypus; syphiloma tubercle.

(7) Congestion from cardiac disease.

In the second class are the hematurias and hemoglobinurias due to

(a) Secondary degeneration from tuberculosis, syphilis;

(b) Dyscrasia and cachexia due to cancer of other organs;

(c) Dyscrasia and cachexia due to infectious fevers;

(d) Dyscrasia and cachexia due to purpura, scurvy, malaria.

The treatment of the second class will be directed toward the underlying constitutional condition.

The treatment of the first class will be to remove the local cause.

In addition to any general therapy it may be necessary, if for no other reason than to allay the patient's fears, to treat the main symptom. We may prescribe

1. Absolute rest in bed.

2. Cold, applied as near as possible to the bleeding surface; e. g., a piece of ice per rectum if the base of the bladder is involved.

3. Gentle attention to the bowels, to keep them soluble; salines, oil, enemata.

4. Diet; a moderate amount of cold water, soft food and such as will not clog the digestive system.

5. Drugs; sedatives, as potassium bromide, cannabis indica, opium; motor excitants, as ergot, nuxvomica (I have seen ergot aggravate symptoms and strychnine in the same case relieve them); astringents, witch-hazel, lead acetate, alum, gallic acid, sulphuric acid; turpentine is generally useful; tincture of the chloride of iron; tincture of guaiacum; calcium chloride to increase coagulability.

Vesical bleeding may require astringent injections. Sometimes clots may have to be removed from the bladder. In some cases the bleeding should be allowed to continue, as a safety-valve in cardiac disease, or a relief to pain in malignant tumors.

This interesting condition which we know as *hematuria* is, of course, only a symptom. But it is worthy of discussion because it frequently rises to considerable dignity on account either of difficulty of diagnosis or treatment, or because of the unfavorable prognosis rendered necessary by the grave conditions which constitute its etiology.

Automatism.*

By Dr. Chas. Adrien Julian, Thomasville, N. C.

For more than a decade of years now the survival of influences that long ago became needful is a chance coincidence, and very few pay homage to the old time religion in the rounding up of the nineteenth century. No other era has ever boasted nor comprehended such a productiveness of nostrums superannuated more remedies of true worth and value. Our prolific resources are universal. Who does not know the wonders of our chemists' creation? The vision of tablets with little letters thereon to tell us what we are giving. The pill bedecked with ribbons and painted in gaudy colors, the bottles shaped in peculiar styles, labels printed with specific directions, vest pocket reference books with efficient combinations, these, these arrest the physician's step and charm his musing memory.

We can give no proper notion of the measureless play of the imagination of the thousands of medicine inventors.

Were I an artist, I should supplement this by illustrations with studies of the twentieth century evolution. I should pre-

*Read before the North Carolina Medical Society, at Tarboro, N. C., May, 1900.

sent to you men distinguished by garments on which were embroidered various educational symbols bearing in their hands a cranioscope by which they could test the strength of their patients' character. "Absent treatment" would frequently cure, but where Fluoroscope would reveal a plethoric purse, treatment face to face, aided by the anointing of oil and the laying on of hands, which had been previously magnetized by a magnetist-in-chief, would abrogate the disease and the contraction thereof never again be possible. Making colors and shapes are not sufficient; every tablet must be plainly marked; yea, even in plain English. The time was when Latin abbreviations could be understood, but for fear the mechanical M. D. should not realize what he is giving, for fear that his tablets should be placed in a wrong container, a symbol in plain English is stamped indelibly marking its imprint through and through equal to that of "Pear's Soap." Some are placed in the different constellations. I have heard that new stars are constantly being discovered, scientific men are zealously laboring for the benefit of mankind, and now more moons are found, and we must look heavenward for our therapeutic arrangement. When that moon is plucked alphabetical classification is advantageous as a refresher of the memory of the possessor.

The manufacturers are most painstaking, and have succeeded in graphically describing in concise form how, when, and what. One's attention is quickly attracted by these methods, interest grows apace, he is unconsciously imbued with the feeling that he has the latest schism.

A general desire has sprung up among the members of our profession to do something new. I know that the seed of progress has blossomed and borne fruit. I know that better laws requisite to educational attainments have accomplished much, that the several Staies are trying hard to rid the general public of impostors, itinerants, mediums and quacks. The young practitioner of to-day is compelled to give years of hard preparatory investigation and made replete and capable. All this and more is true and should be, but simple things have been done with, old ideas relegated and new ones born and accepted in the same moment. I believe in the thing that has the power to out live its first impression, and deepen as it gets riper, the good it did at first.

People are credulous and curious, learning has been traduced to the nauseous lore of the unreal. Common methods have ever been rejected for the intricate since Naaman, the Syrian, tried to refuse the advice of the

prophet, to wash. He would rather place the stigma of Divine disapproval upon himself than to resort to the ordinary methods of hygienic purification. We are disposed to seek ideas born in other brains rather than to arrange and analyze patiently waiting upon successful investigation and finding that recompense for which all labor is forever rewarded. By thus amusing ourselves with their tempting fruit, making knowledge a thing of mere sensation, moving and chattering, submitting our wants without question to the transcendent minds that furnish our supplies we frustrate the aims and teachings of a noble profession. I, myself, have found it easier to follow the suggestions of others. My tastes for articles "made in Germany" became a mania like that of a "Dutch burgomaster for tulips," but the sins of ignorance have been expiated by the acceptance of the synthetic compounds "made in America." Yet I would satirize the folly and duplicity of my brethren. Our literature of to-day is replete with loudly proclaimed discoveries; page by page of error is added by the enthusiast who is whirling with his ambition by the shortest route to immortality and the din of his chaos is drowning "the still small voice of truth." Documentary evidences mailed to each physician, investing him the odlytic force which involuntarily aborts pneumonia, is another triumph of the twentieth century evolution.

It was Mesmer, who on discovering "animal magnetism" immediately bottled it, offered it for sale for the cure of all disease. In my wicked dreams I am enamored, I am entranced, my soul is driven like a leaf before the autumn wind. The spirit of Mesmer stands before me, behold the apparition. The legerdmain of the year two thousand and ten is revealed, and the defrauding trickster, the alchemist, is no longer sending us samples with instructions by mail, but by the faster method of ærial transmigration or etherization he pounces down upon us and exhibits his "Patent Mode of Education." Typhoid fever will have its typhoidin, malaria its malarian, pneumonia its pneumococine, consumption its tuberculin, tonsillitis its quinsin, and the seven year itch its scabiesen. The simple minded will endorse the "slate-writing," and give their experiences of hasty practical application of the newly discovered remedies in disregard of all dangers attending such practice. But their names must be immortal, must live in the pages of the "Doctor's Factotum," and thus he becomes the automaton played upon by the irresistible suggestions of the operator.

I have tried to make prominent our sub-

ordination. I have tried in my very modest way to show my contemptuous disregard for the processes by which we are made machines without limitation, by deriding the servile manner in which we are made to prescribe.

I am prepared to admit the irrelevancies of this harangue, but the obligation upon which I must insist is to know what we are prescribing, and knowing dare to do it.

DISCUSSION.

DR. M. H. FLETCHER.—I think this paper very timely and appropriate, and I think there is lots of food for thought in it. By the use of these remedies that have been brought around and forced on us not unwillingly, our knowledge of medicine and pharmacy is running to seed. We ought to look more to our medicines or we will forget how to write prescriptions. We are really using ourselves to advertise these medicines.

Surgical Treatment of Gall Stones, Report of a Case, Removal of Sixteen Stones and Exhibition of Specimens.*

By J. B. Smith, M. D., Pilot Mountain, N. C.

The presence of biliary concretions in the gall bladder in view of the importance of the surgical aspect of the subject deserves a brief consideration of the composition of such concretions and of the fluid from which they crystalize.

The anatomical relations of the gall bladder and ducts being considered, but it is important to observe that the desquamation of the epithelial cells and abundant mucous secretion of the glands with which the gall-bladder is liberally provided play and important part in the development of gall stones. The gall-bladder is a reservoir merely serving to store the bile and allow of its slow discharge into the intestines. It has been difficult to reconcile the apparent superfluity of this fluid with its necessary storage. The horse and some other animals have no gall-bladder, and to all intents and purposes it is evidently of little or no utility to man. When it is entirely removed his digestion and nutrition go on just as well. Furthermore, the absence of the bile from the intestines, as in cases where it is entirely removed by external fistula, is consistent with perfect health.

Indeed, when reabsorbed into the system it is a distinct poison, being according to

Bouchard, nine times as poisonous as urine. The liver may form bile enough in eight hours to be fatal if it be all absorbed. In other words, it seems to be wholly excrementitious.

Physiological experiments seem to show that it is in some way a slight but unnecessary aid to the pancreatic secretion in emulsifying fats.

The amount daily excreted is one pound. This has been watched for weeks in a case of biliary fistula with complete obstruction of the common duct. Patients discharging all bile externally, as a rule, notice no difference in their daily health or bowel function, unless it be an occasional tendency to flatulence which may be corrected by the administration of dried ox-gall in capsules, ten grains at each meal. The composition of bile allows of a separation of solid ingredients—cholesterin (which constitutes 2% of normal bile), bilirubin, all calcium carbonate in the presence of certain altering and irritating substances. Such, at least, is all that can be said from a study of the nuclei of gall-stones. In them is found a group of degenerate epithelium cells or mucus or viscid liquid, in which at times a bacillus resembling *coli commune* appears, some times permeating these stones.

The development of the calculus seems to depend on crystallization of the excess of cholesterin and bile-salts, possibly due to temporary or a transient catarrh of the mucous membrane, or as Robson calls it, "desquamating angiocholitis." As far as any judgment can be formed at present, the causes are two—stagnation and a morbid state of the epithelium. It has been shown by Naunyn that the epithelial cells lining the gall-bladder exude a gelatinous substance readily changed to cholesterin crystals by acetic acid. This fact, in conjunction with the observation that pure cholesterin-stones will increase in a gall-bladder after occlusion of the cystic duct, accounts for their appearance almost exclusively in the gall-bladder.

The calculi vary as much in size as in composition and color. The smallest are like grains of sand, and have been counted up to over seven thousand in one gall-bladder. It is not infrequent to find one or two hundred of the size of bird-shot, but by far the most usual of these cases falling into the surgeons hands are those containing from one to ten, varying in size from a chestnut to a walnut. In color they are of pearly-white or asbestos-like appearance, shining with cholesterin crystals, or finally black looking and feeling as if formed of dried licorice extract. The variations depends on the amount of coloring matter,

*Read before the North Carolina Medical Society, at Tarboro, N. C., May, 1900.

In hardness they vary also, from being so soft when of pure cholesterin type as to be easily crushed in the fingers, up to the hardness of a vesical calculus, in which case there is an admixture of lime salts precipitated by inflammation.

The great prevalence of cholelithiasis is shown by post-mortem statistics, which reveal its presence in vast numbers of people having no previous suspicion of its existence. The statistics vary in different communities but on the average one individual in ten is affected. (Naunyn). Yet Paulsen says that in Denmark in over nine thousand autopsies there were three hundred gall-stone cases or about one in thirty.

The percentage of those in whom post-mortem reveal their presence shows that in advanced age they are much more common, so that after six years one person in six is affected.

In women the disease occurs in a greater number than men—the ratio of five to two. This has been explained, for want of better reason, by tight lacing and bile stagnation.

It is notably true that when cancer of the ducts is present, gall-stones are more often found. Zenker found them in 85% of the cases of cancer. This and other pathological grounds have led to the generally accepted theory of their presence or passage being the occasion of cancer growth. The absence of stone is of course to be expected in many cancer cases, because its very irritation in transit led to the trouble which only came after its expulsion.

While the gall-bladder is often distended by stones faceted and lying together like beechnuts, the patient is unconscious of their existence until one attempts the passage of the cystic duct. Then begins the trouble that is only rivalled by labor. The muscular coat of the duct grasps the stone, and active peristalsis of the entire canal and wall of the gall-bladder begins. Irritation engenders secretion, and an additional fluid poured out into a gall-bladder *vis a tergo* which ends in expulsion. The cystic and common duct endure a dilatation proportionately greater than the parturient canal. The ducts which are of the size of a very fine quill easily suffer dilatation, so that the index finger passes readily in, and in the surgeons experience a stone as large as the end joint of ones thumb may be found in any part of the canal, Rokintansky records one the size of a pullet's egg which he found half extruded into the duodenum.

Nature is not always so successful, however. In her expulsive efforts a relatively

large number of patients die while awaiting nature's ambitious ending. In a large proportion of cases a pathological change is seen which is nature's wonderful provision to accomplish by another route what she would fail in if the attempted expulsion by the papilla were persisted in. That process is ulceration, by which the wall of the canal is penetrated by pressure of the stone, and having time to seal itself by plastic adhesion to a neighboring organ, penetrates that also and discharges the stone into the duodenum, stomach, or colon. Unfortunately, this beautiful scheme sometimes miscarries, and the discharge takes place into the peritoneal cavity or other vital parts, sacrificing the patient's life at times. The slowness of the process, however, enables the discharge to follow the direction of least resistance, or where guided by natural barriers. Hence we find it discharging sometimes at the navel, having followed the round ligament of the liver, sometimes in the loin or in the inguinal region.

The symptoms of an attack, which means the passage of a stone, can be almost predicted when one considers the process as just narrated. A sudden onset is almost uniform. Intense pain seizes the patient under the right ribs, often shooting through to the shoulder blade. Nausea, fainting, vomiting, sweating ensue. The pain abates and returns; paroxysms compel the patient to double with pain. There is no fever. The attacks endure from a half hour to two days, but as a rule, are ended in twelve to twenty-four hours. It is probably true that with few exceptions all frequent attacks of pain which are located beneath the right lower ribs, and are attributed to indigestion pains, are due to the passage of very small stones, of which post-mortem reveal so many unsuspected cases. Too much emphasis can not be placed upon the absence of acute colic at the onset of a slow advancing jaundice as indicating malignant or inflammatory obstruction.

The surgeon's special interest is with cases of constantly repeating attacks which call for interference either because of frequency, severity, or disablement. It is not uncommon to see the morphine habit established because of frequent need of its administration. One such case of ten years standing relieved by operation, and after three years the patient had still not returned to the habit.

It is a matter that rests entirely with the patient to say when the surgeon shall step in. But with the faith in the safety of operative procedures, born of recent experiences, one may now confidently advise operation in cases of even moderate disable-

ment. The risk of leaving calculi are not small. Fever of a septic type, associated with jaundice and strongly resembling ague attacks, are to be recognized as due to a rest of the calculus partly obstructing the common duct, eroding its epithelium, allowing absorption, and leading to a train of symptoms that are a menace to life and health. The passage of very large stones painlessly is not uncommon, as shown by their discovery in the bowel as obstructing enteroliths without previous history of colic. Such transit from the gall-bladder must always be by ulceration, and, moreover, by ulceration into the duodenum, inasmuch as these stones are usually found in the narrowest portion of the ileum within a yard of the ileo-cæcal valve.

The presence of glycosuria in connection with some gall-stone diseases had been shown by Ord to be due to functional pancreatic disturbance through solar-plexus irritation. It disappears directly after the stones are removed and is no contra-indication to operation. Gall-stones are not uncommonly vomited, in which case they have returned through the pylorus rather than ulcerated into the stomach, as has been shown by post-mortem.

"When is a stone hopelessly impacted so as to require operation?" is a question of less importance to-day than in the past. The surgeon does not do his duty by the victim if he waits for him to be nearly exhausted. The results of operative relief are so uniformly good in uncomplicated cases that to await is only to invite complications. It will never be possible to assert that the last stone has left the gall-bladder after three or four attacks, and one may now place the operation in the interval or during an attack on a higher plane of safety than that for appendicitis.

As to the method of operating and the various operations for gall-stones I would refer you to the standard works on surgery.

Mrs. H., widow, age 56 years, mother of three children, weight 120 pounds, health not very good, rather delicate, troubled with indigestion, and slight jaundice at intervals. Occasional attacks of hepatic colic.

I was called to see her about May 1st. She was suffering with a severe attack of hepatic colic, pulse 110, temperature 103, injected morphine, which gave relief. On the following day found a slight swelling in the right iliac region, about McBurney's point, very painful; had several severe chills; consultation was asked for. Drs. F. & F. saw the patient with me; the swelling continued to increase and soften for several days, slight fluctuation in same; in-

troduced hypodermic needle and drew out syringe full of pus; decided to operate.

On May 10th, 1900, I made an incision three inches long just over McBurney's point; removed about 16 ounces, thick, offensive pus and a gall-stone passed out with it. Passing the finger up into the wound the stones were easily removed; the last two were more troublesome, as I could only touch them with point of finger. They were larger; made another incision over the stones, and by passing the finger in this incision and passing a spoon curette around them succeeded in their removal. Sixteen stones were removed, the gall-bladder was ulcerated and several stones had passed down in the inguinal region.

The wound was stitched up and dressed antiseptically. Ten per cent. iodoform gauze strips left in each wound for drainage, wounds dressed daily; the lower wound was discharging bile and healing rapidly. The patient's temperature 99½, pulse 80, appetite good, rests well, rapidly recovering, will probably have a biliary fistula for a while at least.

This case shows that gall-stones may travel in strange places occasionally, and have some symptoms that might be mistaken for appendicitis.

Infant Feeding.*

By. Dr. J. C. Walton, Reidsville, N. C.

A thorough understanding of the conditions of nutrition is the most important part or groundwork of pediatrics, and no physician can successfully treat the diseases of infancy and childhood without correct ideas in regard to the feeding of a child during the first few months of its life. Bad feeding may not only produce indigestion, diarrhea, marasmus, etc., but the seeds are often sown for chronic indigestion, rickets, and general malnutrition, and these conditions are the most important predisposing causes of the diseases of infancy. It is not simply a question of knowing how to save a child's life, but to employ those measures that will conduce to a healthy growth, and a normal development of all the organs of the body.

In building up the cells of the body, the proteids are first in importance, the carbohydrates second and the fats third. As heat producers, the fats come first, the carbohydrates second, and, practically, the proteids should never be called upon for this purpose. In a proper diet, all of these elements should be combined. Owing to the

*Read before the North Carolina Medical Society, at Tarboro, N. C., May, 1900.

indigestibility of proteids it must be first reduced, but children fed on low proteids must be closely watched, as it is always hazardous to keep infants long on a food which is both low in proteids and fats. Mother's milk is, of course, the only perfect infant food, and should be used as the standard in preparing all other infant foods. Unfortunately, the number of mothers who cannot nurse their infants is simply appalling. One of the most prominent Pedriatrist in this country says that not more than one-third of the mothers in his city are able to nurse their children, and here, in our healthy climate, you may find a great many mothers who are unable to do the same. Clinical experience has proven that the only available and perfect substitute for mother's milk is modified cow's milk. Breast milk and cow's milk differ in important details, but cow's milk, with the addition of water, cream, and milk-sugar can be made to conform very closely to that of mother's milk. Breast milk contains 4% fat, 7% sugar, and 1 1-2% proteids, with salts and water, and is alkaline in reaction; while cow's milk contains about 4% fats, 4% sugar and 4% proteids, with salts and water, and is acid in reaction, and contains bacteria; or, in other words, mother's milk, roughly speaking, is 4, 7, 1 1-2, against 4, 4, 4, of cow's milk. The latter contains the proper proportion of fats, about one-half the proportion of sugar, and about three times as much proteids. The proteids of cow's milk have to be reduced by diluting and is more difficult of digestion than the proteids of breast milk. The proper proportion of sugar can be brought up by adding milk-sugar, and the proportion of fat by adding cream. Enough food should be prepared in the morning for one day's feeding only. The milk-sugar should be dissolved in boiling water, and filtered if necessary, then poured in a pitcher and the cream and lime water added, then divided into the number of feedings required for the day, each feeding being put in a separate bottle, and stopped with absorbent cotton. The bottle should then be cooled rapidly by standing first in tepid and then in cold water, and afterwards placed on ice. If the milk is to be pasteurized, this should precede the cooling. To obtain the cream, which is practically superfatted milk, a jar of average cow's milk is allowed to stand in a cool place for five hours, and the upper one-fifth removed, which will contain 12% fat (that is 6oz. from 1 qt.).

I append a few formulæ with directions for converting cow's milk into a proper infant food from the third day to the tenth

month. It must be remembered that these formulæ are merely illustrative, and, like prescriptions, only meant to apply to their particular cases, the percentage being changed from time to time to meet the infant's growing demands. A cow's milk contains, necessarily, great numbers of bacteria, sometimes pathogenic, which may produce serious diseases, such as typhoid fever, diphtheria, dysentery, tuberculosis, and many forms of diarrhea, especially so in hot weather, when the utmost care should be taken in the handling of milk. It is better pasteurized than sterilized (212 Far. heat), as sterilizing renders milk less digestible and more constipating, impairs its nutritive properties, and it should never be used as a food for any length of time, as rickets and scurvy frequently develop after its use. Pasteurized milk, by means of Freeman's pasteurizer, where the heat is only carried from 155 to 170, will kill the germs without impairing the digestibility or affecting the taste of the milk, and it will keep for two or three days. In the country where pure, fresh milk is obtainable, it is not necessary to pasteurize, but in the city it should be done, and milk should be kept scrupulously clean, and in a cool place, as a low temperature inhibits the growth and development of bacteria. In the gastro intestinal and diarrheal diseases of infancy, milk should never be given, and its use should be absolutely prohibited until convalescence is well established, as, in these cases, milk acts as an ideal culture field for bacterial growth, and it is not improved by giving it sterilized, for it will not remain sterile any longer than swallowed in a septic stomach or bowels. Further, if the disease becomes established and inflammation takes place in the bowels caused by the bacteria and their product, and rest being absolutely important in the treatment of an injured organ, this the milk will not allow, as a large portion of it must pass through the entire length of the intestinal canal. The diet in this form of illness must consist of food which will be absorbed direct from the stomach, and not form waste matter and furnish culture medium, and act as a local irritant.

For years I have almost discarded the use of milk as a diet in typhoid fever. I rarely have tympanitis and the diarrheal and other symptoms are much more easily controlled, and the mortality very much lessened.

Peptonized milk: (The milk being partially or completely digested) may be used for infants who have great difficulty in digesting the proteids or curds, and during an attack of acute indigestion. Completely

peptonized milk should not be used for a longer period than a few days or weeks, partially peptonized milk may be used for two or three months, but not indefinitely, and should be left off gradually by shortening the time of peptonizing and lessening the amount of powder used. To peptonize, dissolve 5 grs. pancreatin, and 15 grs. bicarbonate of soda in a gill of water, and add milk to one pint, putting this in a vessel of hot water at 120, and leave for ten or twenty minutes, then, remove, cool rapidly and put on ice.

Condensed milk: Sometimes we are obliged to use condensed milk in poor people, who are unable to buy fresh cow's milk. As ordinarily used, in a dilution of one in twelve. This dilution would give us five-tenths fat, six-tenths proteids and 4 p. c. sugar. A child could sometimes do well for a short period on this food, but the percentages are too low, and may be improved by adding meat broth made by boiling good beef, 1 lb. to a qt. of water, until the liquid is reduced to one pint, so that one part of condensed milk is added to twelve of the broth. This mixture will contain five-tenths fat, one-fourth proteids and 4 p. c. sugar; this will answer for a child of three months of age, the additional fat being supplied by the use of codliver oil. At six months, one part of condensed milk is added to nine of the broth, the per cent will then be 1.75 fat, 1% proteids and 5% sugar. This, with the codliver oil will last until the ninth month, when the critical nursing period is past, when barley and oatmeal gruel and other meal mixtures may be allowed. Condensed milk fortified may be an acceptable diet for infants. Alone it is a food upon which a certain number of children exist until age or changed conditions allow a better diet, and, inasmuch as there is nothing to take its place among the very poor, its value to them is inestimable.

In cases where milk temporarily disagrees, beef juice and farinaceous foods may be substituted, and for short periods infant foods may be given, but only temporarily and as a makeshift, until the stomach is in a condition to take other food. Infant foods are greatly inferior to modified cow's milk, and, often used, they are capable of doing, and have done much positive harm. There are two diseases, rickets and scurvy, which frequently follow their uses, and they should be prescribed, like drugs, knowing what they do and what they do not contain.

If the infant ceases to gain in weight, I increase all of the per centages, at the onset of illness I diminish them by diluting them with an equal quantity of water to suit the enfeebled digestion. If there is habitual

colic, especially with curdy stools, diminish the proteids, if there is constipation, increase the percentage of fats, for frequent thin yellow stools or sour vomit, lessen the fat. During the hot months, make the proportion of cream less than in cold weather and during excessive heat, it should be very much less, and water should be given freely. Frequently, the cause of vomiting in children, shortly after eating, is due to too much feeding at one time, or taking food too rapidly. Sugar seldom gives trouble, except that a lack of it interferes with growth and an excess sometimes produces fermentation. Mixed milk from a herd is better than the milk from a single cow. Never allow an infant to nurse longer than twenty minutes.

I trust the fellows of this Society will agree with me that this per centage modification of cow's milk for infants is not too complicated for the average physician. Simple as it is, this scientific, rational, accurate and satisfactory method of baby feeding is but little practiced by our physicians, still it is the clearest and most practical advance in infantile therapeutics, and one in which America has taken the lead of the world.

Authorities referred to are, Holt on "Diseases of Infancy and Childhood" and Kerley Clinical Lectures, New York Polyclinic.

Formula I. (Third to fourteenth day.)

Ingredients. Quantity of each required to make.

	12oz.	16oz.	20oz.	24oz.
Milk, ozs.	1	1 1-4	1 1-2	2
Cream, ozs.	1	1 1-4	1 1-2	2
Limewater, ozs.	3-4	1	1 1-2	1 1-2
Water, ozs.	9 1-4	12 1-2	15 1-2	18 1-2

Milk sugar, even
tablespoonfuls, 1 1-2 2 2 1-2 3
Formula I. contains 6 p. c. sugar, 2 p. c. fat, proteid, 0.6 p. c.

The amounts mentioned are those for 24 hours. There are required at this time ten feedings in 24 hours, which should be given every two hours from 7 A. M., to 10 P. M., and every 4 hours from 10 P. M., to 7 A. M.—Holt.

Formula II. (Second to sixth week.)

Ingredients. Quantity of each required to make.

	20oz.	24oz.	28oz.	32oz.
Milk, ozs.	2	2 1-2	3	3-4
Cream, ozs.	2	2 1-2	3	3 1-4
Limewater, ozs.	1 1-2	1 1-2	1 1-2	2
Water, ozs.	14 1-2	17 1-2	20 1-2	23 1-2

Milk sugar, even
tablespoonfuls, 2 1-2 3 3 1-2 4
Formula II. contains fat 2.5%, sugar 6%, proteids 0.8%.

Feedings in formula 2 are same as in for-

mula 1 only the amount may be increased to as much as 32 ozs. in twenty-four hours in robust children.—Holt.

Formula III. (Sixth to eleventh week.)

Ingredients Quantity of each required to make.

	24oz.	28oz	32oz	36oz.
Milk, ozs.	3	3 1-2	4	4 1-2
Cream, ozs.	3	3 1-2	4	4 1-2
Limewater, ozs.	1 1-2	1 1-2	1 1-2	1 1-2
Water, ozs.	16 1-2	19 1-2	22 1-2	25 1-2
Milk sugar, even				
tablespoonfuls,	3	3 1-2	4	4 1-2

Formula III. contains fat 3 p. c., sugar 6 p. c., proteids 1 p. c.

Eight feedings are required in 24 hours, every 2 1-2 hours from 7 A. M., to 10 P. M., and one feeding between 10 P. M., and 7 A. M. An average child starts with 24 and increases to 34 ozs. and a robust child starts with 24 or 28 ozs. and increases to 36 ozs.—Holt.

Formula IV. (Tenth week to fifth month.)

Ingredients. Quantity of each required to make.

	28oz.	35oz.	42 oz.
Milk, ozs.	8	10	12
Cream, ozs.	3 1-2	4	5
Limewater, ozs.	1 1-2	1 1-2	2
Water, ozs.	15	19 1-2	23

Milk sugar, even

tablespoonfuls, 3 1-2 4 1-2 5 1-2

Formula IV. contain 3.5 p. c. fat, sugar 7 p. c. proteids 1.5 p. c.

Seven feedings in 24 hours every three hours between 7 A. M., and 10 P. M., and one feeding between 10 P. M., and 7 A. M. An average child will begin with 28 ozs. and increase to 35 ozs. A robust child will begin on 35 and at the end take 42 ozs.—Holt.

Formula V. (Five to ten months.)

Ingredients. Quantity of each required to make.

	30oz.	36oz.	42oz.	48oz.
Milk, ozs.	11 1-4	13 1-2	15 3-4	18
Cream, ozs.	3 3-4	4 1-2	5 1-4	6
Limewater, ozs	1 1-2	1 1-2	2	2
Water, ozs.	13 1-2	16 1-2	19	22

Milk sugar, even

tablespoonfuls, 4 4 1-2 5 1-2 6 1-2

Formula V. contains fat 4%, sugar 7%, proteids 2%.

Should be given every 3 hours from 7 A. M., to 10 P. M., but no feedings between 10 P. M., and 7 A. M.—Holt.

Phenalgin.

Dr. Clemens W. Mc Millan, of St. Louis International Journal of Surgery, May, 1900, writes of his experience with Phenalgin, as follows:

I could cite you a good many cases that I have used it in, but it would be the mere

repeating of results others have had, for any physician who would give it a fair test, will not be disappointed, for it is as certain in its action as the sun that gives us light and heat.

Phenalgin, in my opinion, is one of our most reliable analgesics and hypnotics. I have one patient, a business man, who will get on an "occasional spree," and when he does, he invariably comes to me for some of those "little tablets" to ease his head and allay that "uncertain feeling" in his stomach. I usually give him a dose of about 15 grains, and have never had to repeat it. As he expresses it, he feels like a "new man" in a half hour.

There is no doubt but that Phenalgin possesses marked hypnotic power. I have given it in doses of from 10 to 20 grains, to hysterical women during menstrual period, when chloral, trional, or the bromides seem to have little effect, only to have them quiet down and go into a sleep lasting several hours, and awaking entirely free from pain, or if any pain at all, it would be very slight.

In la grippe, in combination with quinine (R Phenalgin, quinine sulphas aa gr. two every three hours), I have found it to act very nicely, especially in relieving the distressing neuralgic pains accompanying la grippe.

Now a few words in regard to dosage. I have found the 2½ grain tablets to relieve a mild pain, and act very satisfactorily as an antipyretic; but, to get positive analgesic and hypnotic effects, I recommend doses of from 10 to 30 grains. I gave one patient a dose of 40 grains, without any unfavorable after-effects.

1011 Cass Av., St. Louis, Mo., April 19, 1900.

Uric Acid and Headaches.

A physician who has been experimenting to discover, if possible, a relationship between headaches and the retention of uric acid, found experimentally, that he could produce a headache in himself by adopting a diet of meat and cheese—foods which are highly nitrogenous and which in their burning up, produce a great deal of uric acid. He found in himself an excessive excretion of uric acid during a headache, which perhaps means that a headache is a sign of nature's effort to relieve the system of a poison that would do worse than produce headaches were it permitted to remain. Such a headachy condition is comparable to the fevers which the human system often establishes for the purpose of ridding itself of disturbing impurities, and can best be overcome by the timely administration of Laxative Antikamnia and Quinine Tablets.

THE

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SUBSCRIPTION. \$2-50 PER YEAR,**CHANGE IN NAME ONLY.**

With the May issue, 1900, the name of the *Alabama Medical and Surgical Age* will be changed to the *Alabama Medical Journal*. This change is made because it is shorter, and suits the editor and a large number of subscribers and patrons better.

This thing of having a name extending over into the next county is all wrong and we are glad to see that our neighbor has boiled his down to the pharmacopeal strength and consistency.

LANDON CARTER GRAY.

Some men live more in five years than others do in ten. Life is brief enough at best, but a few crowd into its short span a list of deeds which reach out through the ages yet to come. Dr. Gray graduated from the Bellevue Hospital Medical College in 1873, and in these 27 years he made his strength and power felt in his profession.

He was Professor of Nervous and Mental Diseases in the New York Policlinic; Visiting Physician to St. Mary's Hospital; Neurologist to the Hospital for Ruptured and Crippled; Ex-President of the New York Neurological Society; Fellow of the New York Academy of Medicine, and President of its Neurological Section; Ex-President of the American Neurological Association; President of the Society of Medical Jurisprudence, and a member of several other societies.

He was not content to allow his name to appear merely on the roll, but was always ready and willing to work and did much to further the progress of neurological science.

On Tuesday, May 1st, 1900, he passed out on the great unknown sea, the shallow depths of which we know, but of the intervening waste and other shore we can have no adequate conception. He died full of

honors, hedged in with esteem, and his mantle has fallen on another.

Wm. B. Pritchard, who for the past twelve years has been associated with Dr. Gray in his work, succeeds to his practice.

Dr. Pritchard is a young man but his judgment is mature and his skill has been perfected by his association. His ability will rise to the responsibility of his new position, and the work will not suffer in his hands.

THE PRESIDENT FOR 1901.

The Medical Society of North Carolina by a unanimous vote elected Dr. Julian M. Baker, of Tarboro, President for 1901, and those of us who know the man are glad that it is so.

Dr. Baker was Secretary of the Society from 1886 to 1890, and while in this position he demonstrated his worth and merit as an officer. He did a great deal of work in systematizing the deliberations of the association and greatly enhanced the value of the printed transactions. He served as a member of the Board of Medical Examiners from 1892 to 1898, and was its President during the entire six years. Dr. Baker joined the Society at Greensboro in 1879, and during all these years he has been a regular attendant. And he attended not merely as a looker on but took an active part in all the work of the Society. It is certainly right and just and proper that such a man should be given the highest honor within the gift of the Society. And coming to the place in such a way he will preside with dignity, with credit to himself and with honor to the Society.

We congratulate the President for 1901 upon the honor conferred upon him and for his own efficiency for the place and the Society for the wisdom of her choice.

THE TARBORO MEETING OF THE STATE SOCIETY.

The Medical Society of the State of North Carolina held its 47th Annual Session in Tarboro, May 22d and 23d, 1900.

One hundred and twenty-five members were present and the social feature was enjoyable. These members were the faithful ones who love the Society and its work above every thing else, and to meet with them was to catch a new inspiration and to get a new faith in the future of the organization.

The number of papers was small and so the scientific part of the session was not as full as it should have been.

Out of ten chairmen of sections only three were present, and in several sections no papers were presented at all.

Every chairman should realize that much

of the success of the annual meeting depends upon him, that he is as important in his sphere as the President himself and he should allow no ordinary difficulty to prevent him from coming.

A chairman is apt to put off securing papers for his section until just before the meeting when the members are less likely to get up a paper; instead of this he should begin as soon as he is appointed, and he should write not to ten members nor even twenty-five, but to one hundred if necessary. We know that out of 500 members actively engaged in the practice of medicine and surgery, at least 50 could present interesting and instructive papers at the annual meeting. To see to it that they do this is the duty of the chairmen of the several sections.

The members should realize that the meeting together with physicians from all parts of the State will develop them, broaden their minds and deepen their thoughts. The busier a man is, the less he can afford to miss one of the annual gatherings.

To the member who attends once in five or seven years the deliberations seem uninteresting and the speakers appear as strangers, but to get rid of this let him attend regularly for five or ten years and then the work becomes delightful and those who take part have all the attractions of bosom friends. It is then that the work is sweetened and made fragrant by the thrill of social intercourse and we look forward to a meeting with all the anticipations of a family reunion.

The local committee gave every assistance to the effective work of the Society, and their thoughtfulness was greatly appreciated.

The next meeting will be held in Durham sometime during the month of May, 1901.

ATTENDANCE AT TARBORO.

The following names appear on the Registration Book: Drs. J. R. Hester, Prospect Hill; W. E. Murphy, Carr; K. P. Battle Jr. Raleigh; Jno. A. Myers, Lexington; M. H. Fletcher, Asheville; J. H. Marsh, Fayetteville; Jeff. D. Jenkins, Crisp; L. Rutherford, Kinston; S. West-ray Battle, Asheville; Rob't S. Young, Concord; A. J. Thompson, Stovall; Geo. W. Pressly, Charlotte; Wm. H. H. Cobb, Goldsboro; Thos. E. Anderson, Statesville; Edward C. Register, Charlotte; E. M. Summerell, Mill Bridge; R. H. Speight, Wendale; Rich'd H. Lewis, Raleigh; Chas. J. O'Hagan, Greenville; C. V. Reynolds, Asheville; L. L. Staton, Tarboro; J. C. Walton, Reidsville; H. H. Dodson, Milton; W. L. Dunn, Asheville;

W. C. Galloway, Wilmington; Jos. Dixon, Ayden; John C. Rodman, Washington; J. G. Blount, Washington; J. B. H. Knight, Williamsville; Albert Anderson, Wilson; C. O. H. Laughinghouse, Greensville; W. F. Cherry, Coakly; W. H. Ward, Plymouth; B. F. Halsey, Roper; R. A. Whitaker, Trenton; J. H. Baker; Tarboro; W. B. Pitt, Old Sparta; Julian M. Baker, Tarboro; W. J. Thigpen, Conetoe; B. Ray Browning Littleton; J. W. Jones, Tarboro; Frank H. Holmes, Clinton; C. A. Whitehead, Tarboro; A. B. Noble, Tarboro; H. T. Bass, Tarboro; J. Howell Way, Waynesville; J. F. Sandford, Creedmore; G. M. Bell, Wakefield; J. T. J. Battle, Greensboro; C. M. Poole, Craven; K. Leggett, Hobgood; Thos. S. McMullan, Hertford; O. McKullan, Elizabethe City; W. L. Isley, Rock Creek; J. A. Faison, Bennettsville, S. C.; E. F. Darby, Lynchburg, S. C.; G. W. Lewis, Fremont; John B. Carr, Old Sparta; R. P. Morehead, Lasker; W. H. Harrell, Williamson; Wm. Edwards, Spring Hope; H. H. Harris, Wake Forest; T. A. Mathews, Castalia; J. R. Whelers, Castalia; J. H. Anderson, Tarboro; W. E. Headen, Morehead City; L. J. Picot, Littleton; W. H. Whitehead, Rocky Mount; R. H. Whitehead, Chapel Hill; H. McKee Tucker, Raleigh; Wm. P. Mathews, Richmond, Va.; T. L. Brooks, Black Creek; Geo. W. Long, Graham; W. D. Bowen, Bath; W. N. Tate, Mebane; A. J. Edwards, Winston; Southgate Leigh, Norfolk, Va.; T. P. Wynn, Tarboro C. E. Moore, Wilson; W. T. Turlington, Fremont; W. J. Harrell, Alexander; J. P. Brown, Guion City; B. L. Long, Hamilton; S. B. Dew, Spring Hope; H. B. Weaver, Asheville; E. F. Corbell, Sunbury; James A. Burroughs, Asheville; D. A. Stanton, High Point; E. T. Dickinson, Smithfield; J. B. Perran, Selma; D. W. Bulluck, Wilmington; Henry W. Lewis, Jackson; R. J. Grimes, Bethel; A. G. Carr, Durham; D. R. Bryson, Bryson City; Chas. M. Hazen, Bon Air, Va.; S. C. Koonce, Pollocksville; Zeno Brown, Greenville; Joseph E. Nobles, Johnson's Mills; E. A. Moye, Jr. Greenville; J. L. Nicholson, Richlands; W. H. Bagwell, Greenville; S. N. Harrell, Tarboro; Jno. W. Tayloe, Union; E. J. Buchanan, Lexington; William E. Warren, Stokes; Claude M. Jones, Grimesland; R. H. Hargrave, Robersonville; H. M. S. Cason, Edenton; A. C. Hoyt, Washington; R. E. Lee, Clinton; R. L. Savage, Candle; D. T. Tayloe, Washington; M. F. Savage Scotland Neck; G. C. Edwards, Hookerton; Raymond Pollock, Kinston; E. Delia Dixon, Raleigh; Isaac W. Lamm, Lucama;

J. E. Patrick, Institute; Wm. Fountain, Leggett; W. G. Stafford, Burlington; R. L. Payne, Norfolk, Va.; W. H. Wakefield, Charlotte. A total of 125 present. The registration for the past few years has been as follows:

Tarboro,	1900	125
Asheville,	1899	296
Charlotte,	1898	119
Morehead,	1897	77
Winston,	1896	217
Goldsboro,	1895	191
Greensboro,	1894	171
Raleigh,	1893	223
Wilmington,	1892	233

THE BOARD OF MEDICAL EXAMINERS.

The State Board of Medical Examiners met the Wednesday before the meeting of the State Society and made their report the second day of the Society's work.

Out of 79 applicants, 52 were granted license to practice medicine within the State. The highest grade, 93, was made by two young ladies, and the boys will have to look to their laurels.

Two members of the Board retired as their term of office had expired, and two new members were elected to their places.

The two retiring members were Dr. W. H. H. Cobb, of Goldsboro, and Dr. K. P. Battle, Jr., of Raleigh. Dr. Cobb is a man so well known in the Society that it is hardly necessary to say anything about him. He has been and is still one of the Society's most faithful sons. He has performed with zeal and ability any duty that has been laid upon him. He was President at Greensboro in 1892 and was elected to the Board in 1898.

In 1899 and 1900 he presided over the deliberations of the Tri-State Society of the Carolinas and Virginia. He was an ideal examiner and his work here as elsewhere was thorough and complete.

Dr. Battle is one of those certain men who can always be depended on in any crisis. In his manner he is unassuming, and in his work he is faithful and conscientious. As a member of the Board he performed his duty with credit to himself and to the Society. While upholding the standard of the Board to the very limit of efficiency he was at the same time the friend of the applicant and his gentle manner endeared him to all who were associated with him.

To fill the places left vacant by two such men as these, the Society with wisdom selected Dr. J. C. Walton of Reidsville, and Dr. T. S. McMullan of Hertford.

Dr. Walton is known to every attending

member. He comes to every meeting and is accustomed to contribute his share to its work and progress. He is a sound practical man, one who can be safely intrusted with the high duty of medical examiner.

Dr. McMullan has worth and merit bred in his very bones, he comes of a family known for its intellectual power and ability and he has long ago vindicated his right to the name. He delivered the annual oration at Tarboro and it was in keeping with his past attainments. It sustained his reputation as a powerful thinker and a beautiful writer.

The Society has acted wisely and well in her choice, and the Board of Examiners should continue to be the bulwark and fortress of progressive medicine in the State of North Carolina.

THE 47TH ANNUAL MEETING OF THE STATE SOCIETY.

The Medical Society of the State of North Carolina met in Tarboro, May 22d, 1900, at 11 o'clock.

The Society was called to order by Dr. Julian M. Baker of Tarboro, Chairman of the Local Committee of Arrangements.

Rev. J. B. Morton led the meeting in prayer, after which Donnell Gilliam, Esq., of Tarboro, delivered an eloquent address of welcome.

Dr. Chas. J. O'Hagan responded on behalf of the Society.

The roll was then called and the President read his message.

The following committees were appointed:

Credentials—Julian M. Baker, L. J. Picot, R. H. Whitehead.

Finance—C. M. Poole, H. M. Fletcher, M. P. Perry.

Pittman Prize—R. S. Young, R. H. Whitehead, K. P. Battle, Jr.

Dr. J. H. Marsh read a paper on "Chronic Cystitis," which was discussed by Drs. R. H. Lewis, J. C. Rodman, C. J. O'Hagan, Fletcher, Holmes, Galloway, Dodson, Sanderford, Whitaker, Bass, S. W. Battle, Walton, Everett, and the discussion closed by Dr. Marsh.

Dr. O'Hagan stated that Dr. Wm. O. McDowell, of Scotland Neck, a dear personal friend of his, had been confined to his bed for several weeks, that he was in a precarious condition and despondent as to recovery, and he moved that a message of condolence and sympathy be sent to Dr. McDowell. Several members seconded the motion, and Dr. Galloway said that he had little sympathy with the idea of being kind to a man when he is dead. He thought

that if we had any beautiful flowers to cast on anybody, we had better do it in the flesh and in carrying out this idea he was heartily in favor of the motion.

The motion was unanimously carried and the Secretary instructed to send a telegram of sympathy to Dr. McDowell.

On motion of Dr. G. T. Sikes a committee was appointed to report on the President's Address, as follows: R. H. Lewis, W. C. Galloway, J. L. Nicholson.

The Treasurer read a card from Dr. C. G. Nichols asking that his dues be remitted on account of loss by fire. After some discussion the matter was referred to the committee on credentials.

On motion of Dr. R. H. Lewis the following names were added to the honor roll of the Society, as they had been members for 30 years:

- Dr. H. T. Bahnson, Salem.
- " W. W. Lane, Wilmington.
- " Wm. J. Love, "
- " Jas. McKee, Raleigh.
- " Willis Alston, Littleton.
- " W. J. H. Bellamy, Wilmington.

The Society then adjourned to meet at 2:30 in the afternoon.

First Day—Afternoon.

The Society was called to order by the President, Dr. Geo. W. Long, at 2:30 o'clock.

The report of the section on Gynecology was called for and Dr. B. Ray Browning read a paper on "Endometritis, its Pathology and symptoms with special Reference to Treatment."

The report of the section on Anatomy and Surgery was then called and Dr. A. S. Pendleton presented a paper on the "Ambulatory Treatment of Fractures" which was discussed by Drs. Picot, O'Hagan, Laughinghouse, and Bass.

Dr. M. P. Perry reported an "Unusual case of Appendicitis."

On motion of Dr. O'Hagan, Dr. J. H. Branham of Baltimore was accorded the privilege of the floor.

Dr. H. T. Bass, read a paper on "Hemorrhoids."

The President announced that all essays in competition for the Pittman Prize of \$100. should be handed to Dr. R. S. Young not later than Tuesday night if possible.

Dr. J. H. Branham of Baltimore read a paper on "Pylorectomy for Obstruction due to Adenocarcinoma." After the reading of the paper, the patient was exhibited and also a section of the growth under the microscope.

On motion of Dr. O'Hagan a vote of

thanks was given Dr. Branham for his interesting and instructive paper.

The Society then adjourned to meet at 8:30 P. M.

First Day—Evening Session.

The meeting was called to order by the President at 8:30 P. M.

A note was read from the Edgecombe Club extending the privileges of its Club rooms to the members of the Society during their stay in the city.

Dr. K. P. Battle, Jr., Chairman of the Obituary Committee, made his report which was adopted.

Dr. J. C. Walton read a paper on "Infant Feeding."

Dr. Baker announced that the Edgecombe Club would give a reception to the Society Wednesday evening after the exercises in the Hall.

Dr. C. M. Poole, Chairman of the Finance Committee, made his report.

The Treasurer presented the resignation of James N. Cunningham, which was accepted.

The President then called for report of interesting cases. The following members responded:

DR. J. F. SANDERFORD: I was called upon some time ago by the father of a child 5 years of age, to prescribe for the child, suffering from nausea, but at the time I did not see the child. He was given the child calomel, followed by a saline. He saw me Monday morning. Monday afternoon about 6 o'clock I saw the child. I suspected that there was intestinal obstruction, but on examination was unable to find any enlargement. There was no history of griping, and I put the child on some pepsin and watched it, and gave it calomel, 1-10 grain, followed by salines. The next day I instructed that an enema be given. Dr. Sikes saw the child with me Thursday. There was complete obstruction, and some tenderness in the region of the gall bladder. There was complete obstruction about 12 days. I think my diagnosis was that there was an obstruction at the pyloric end of the stomach above the bile duct, but what the nature of this obstruction was I would like for somebody to tell me.

DR. G. T. SIKES: In regard to the case Dr. Sanderford has reported we could not say definitely and absolutely what the case was, but our conclusion was that there was obstruction about that part of the stomach, and my opinion was that it was in the stomach or in the intestine, and I based my diagnosis at the time on the fact that there existed a hard spot or tumor about that part that ought to be felt by a digital examina-

tion, and at the same time I rendered the opinion that it was the beginning formation of some abscess, but I believe we never had any verification of that. Of course, it might be possible that the diagnosis was correct, and it may have undergone an absorption or resolution without ever suppurating at all. If it was not that I hardly know what to say, or think, it could have been. If it had been something on the order of a tumor we would not have expected that the child would be relieved and be entirely well. The child got well in about two weeks. The doctor and myself made an application of tincture of iodine on the outside as a counter irritant and kept up the tonic treatment and gave a little pepsin to support life. We tried to give as little food as possible, from the fact that it was only retained a few minutes in the stomach. We did not get a chance to have an autopsy and we have not found out yet what the exact nature of the trouble was, but the child got well.

PRESIDENT LONG: I understand that Dr. Leigh, of Norfolk, is in the Hall. We would be glad to hear from him on any subject.

DR. LEIGH—Mr. President and Gentlemen of the Society:

I thank you very much for this warm reception. I bring you fraternal greetings from the Medical Society of Virginia. I express the earnest wish that we may see many of you at our next meeting in the shadow of the University of Virginia. I hardly know what to talk to you about. I did not expect to be called upon or I might have had something prepared. I may say a word or two in connection with the subject of Dr. Bass' paper on hemorrhoids. I know of no department of surgery in which we can get more brilliant and permanent results than the department of rectal surgery, and especially in the treatment of hemorrhoids. I mean the thorough treatment which is the operative treatment. I do not think that enough stress is laid on the preparatory treatment and after treatment of these cases. Those of us who do hospital work come across too often cases of this kind which have been operated on and in which recurrences have taken place. I do not think a recurrence should ever take place after an operation for hemorrhoids, if the patient is properly prepared, is properly operated and has the proper instructions and carries out these instructions after the operation. In preparing a case for rectal surgery, and I will state that I see no reason why rectal surgery should not be done outside hospitals, but the patient must be looked out for thoroughly. Be-

cause you have not the surrounding of a hospital it seems to me that this is no excuse for doing incomplete work. Unless the case is one of emergency it should be done well. I believe the secret of failure of rectal cases lies largely in the lack of preparation of the patient. The alimentary canal must be emptied completely, so that the bowels will have no tendency to move 3 or 4 days afterwards. The patient in this respect should be prepared a few days before the operation and the evening before the operation should have no solid food for supper. That night patient should be given a mild cathartic such as licorice powder. The next morning a high enema, using a tube that would enter the sigmoid flexure. After an hour or two use a lower one. If the water is colored at all the lower enema should be repeated until the water is clean. In regard to choice of operation, as Dr. Bass, said, you cannot lay down any rule. Indeed, I do not think a surgeon can decide upon the kind of operation for hemorrhoids until the patient is thoroughly anesthetized, and the sphincter thoroughly stretched. After stretching the sphincter we find out how much there is of the piles. If the piles can be compressed and the blood driven out, then the cautery or clamp and cautery is indicated. This clamp and cautery operation is used very extensively in surgery. If the disease has gone on so far as to form new connective tissue it is necessary to cut away that tissue. This can be done by the ligature method or the Whitehead method. The Whitehead is a very efficient operation but should never be done outside a hospital. It is really an excision of the lower end of the intestine. The results are beautiful if properly performed and the patient properly nursed afterwards. There are some risks, however, of the mucous membrane breaking loose. The ligature operation is a very satisfactory one. In regard to the after treatment, the patient should be kept on liquid diet until the bowels are moved. As a rule, no opiate is required. If there is a desire for a movement deodorized tincture of opium or some form of opium may be given to check the movement of the bowels. In my practice I use a tampon canula which consists of a piece of rubber tubing around which is wrapped three or four layers of iodoform gauze, with vaseline rubbed into it. This is inserted to the bowels for two purposes: to bring an aseptic surface against the raw surface of the gut; the other is to permit the passage of gases from the intestines. On the day the bowels are to be moved we give a saline cathartic in the morning. When the patient has desire for movement we in-

ject through the tampon say 4 to 6 ounces of warm sweet oil followed by soapsud enema given with fountain syringe. The bowels are moved without pain and the patient is put in a sitz bath. The bowels must then be moved daily with a mild cathartic, given in sufficient amount to cause one soft action. After the action a sitz bath. After the patient is well enough to leave the hospital he should continue to take sufficient cathartic to cause one soft action a day for months afterwards. I believe this point if strictly adhered to will prevent many recurrences.

DR. G. T. SIKES: I would like a word or two about a case I had some time ago, but I have no data except from memory. The patient was a married lady, had been married about three years. I was called to her some months ago, some time about the middle of last year possibly and treated her from that time on for a case of endometritis. The case improved very much. Up to this time she had no conception, and after some months treatment her condition improved very much, her general health built up and she presented the symptoms of conception. At first I made a diagnosis in a month's time by Hagar's method and told her I thought she had conceived. Her periods did not cease absolutely, but diminished to a minimum, and came on at each regular time. The matter went on and the signs of pregnancy were still not plain to me. She also, while suffering with the endometritis, suffered to a certain extent with displacement of the uterus. After a month's time or a little more I decided that pregnancy did not exist in the uterus, but I found in her case that the right tube was enlarged and it continued to grow, the uterine tissues remaining about the same, the cervix still soft, and as this growth got larger, she was troubled more with the pulling of the uterus to the right iliac space, and I desisted, from the first conclusion that she was pregnant, from the introduction of a sound, and I resorted to the elevation of the hips and lowering of the shoulders, and then it was an easy matter to press the uterus and it would fall back in place. It got so large finally that it would be painful when it fell back, and continued to grow like the normal pregnant uterus, and at the end of four and a half months she felt the foetus perfectly plain and could feel it for nearly a month. The last time I saw her in that condition it was a little more than five months, and pressing the hand firmly on the tumor, I could feel perfectly plain what I considered to be fetal pulsations, and she could feel it also, and did feel it continuously until about the time for the termina-

tion of the fifth month. Before that time I told her what my diagnosis was. She is a very intelligent lady and her husband a very intelligent man. My diagnosis was that she has a case of tubal pregnancy in the right tube. I stated to her that in the modern advancement of surgery our surgeons had learned how to open the abdominal cavity and take out those abnormal pregnancies, and that possibly the foetus might live. At the end of the fifth month her menses came on very full, and she passed a great deal of sloughing and mucus and, as she explained herself, "strings." From a few days before the menses she never felt the movement of the foetus at all. The menstrual period at this time lasted her about three weeks. She was quite feeble, but not confined to her bed. At the end of this time the tumor had entirely disappeared, and there was no more pulsation and no more sign of pregnancy. My diagnosis was that she had a case of tubal pregnancy that the foetus died and was partially absorbed and partially passed through the fallopian tube and uterus.

DR. W. C. GALLOWAY: Since I have been in Wilmington I find a great many cases have come to me with foreign bodies in the eye, which the general practitioner often sees. The general practitioner can, however, usually relieve such case as well as the eye man. All that it requires is a steady hand and courage to go at the eye. Fortunately I suppose I fell heir to an excellent knife that I have in my case. One day I was operating for a case of stricture of the duct and I did something we ought not to do, and that was to hold a small sharp Graeffe cataract knife in my mouth while I was performing the operation, and the knife slipped out of my mouth and fell on the floor, bending the point very slightly, and it is the most useful knife for getting things out of the eye I have ever seen. If the foreign body is just in the epithelium of the cornea, the knife just dips in the epithelium without cutting in any further. I use in the eye a solution of a 4 per cent of mur. of cocaine to relieve the pain. Two or three administrations are necessary. If the foreign body is deep in the eye it is a good idea to send the case to the eye man. As simple a thing as it looks to be I have had the general practitioner to send me a great many cases of foreign bodies under the lid. The simplest thing I know of is take a match or toothpick and gently press on the upper lid, catching hold of the cilia, and tell him to look down and turn out the lid when the foreign body can be wiped off. I throw these things out to the general practitioner

for you can often correct these things without sending to the eye man at all.

DR. J. P. BROWN: I had a patient, a boy 14 years of age, who happened to an accident in a cyclone, a large tree fell on him, and in falling on the boy a large limb struck him on the head and pitched him over and at one place a large limb broke and struck him in the lumbar region and on the right thigh tore away the muscles and flesh on the outside, breaking the femur, which stuck in the ground four or five inches, and the left leg was broken in two places and partially dislocated, and the biceps of the right arm was snagged badly. I found the boy in the rain. He was lying in a low dark filthy hut on a cotton sheet. I looked at the boy and my first impression was if he was not dead he ought to die. I looked him over, and he had a pretty good pulse. I chloroformed him, straightened him out and the more I looked at him the worse he looked. I sat and looked at him awhile and did not know what to do, so I went off and left him. The next day I went back and he was still alive. He had dirt, etc., in the end of the bones. In turning him on his back this large place in the lumbar region seemed to be very deep; I put my hand in it and examined it. I left him there and called in a couple of neighboring physicians. We straightened him out and washed him good all over. We then amputated the right leg up four-fifths nearly of the femur, and I got a very decent flap. The femur was broken in two places and the contraction was very great, and the way he was cared for knocked the antiseptic treatment out. The water used in the operation was gotten from an old well, surface water, and sorter muddy. In thirty days from the time I amputated the right leg I amputated the left. It was not quite a hip-joint operation, but it was high up. The boy is now fat, living and getting on well. The place on the lumbar region healed up and the boy is well, fat and hearty. He has to lie flat on his back as he has not enough left of his legs to sit up.

PRESIDENT LONG: I recall several cases of the colored race in general surgery. I have been in the habit of doing some surgery in a plain way, and I do not remember to have ever had in my practice any trouble with a negro in my operations. I do not think it is exactly correct to say that water is septic because it is muddy, because the soil in my honest opinion is not septic, and if you will give me pure soil and pure water I will bid defiance to pretty nearly everything, and if you will give me pure soil I will almost say it. I will give you the water and the at-

mosphere for that with all its rosy visions rest on the soil. I do not think that the Doctor's statement would be any evidence against the genuineness of asepsis and antiseptis.

The Society then adjourned to meet Wednesday morning at 10 o'clock.

Second Day—Morning.

Society called to order at 10 o'clock by the President.

Telegrams were read from Drs. Levy and Wakefield expressing regrets.

Dr. W. H. H. Cobb made the following remarks as the hour had arrived for the election of two members of the Board of Examiners:

Mr. President, before nominations for Medical Examiners are made, I would like to submit a few remarks for the good of this Society and for the benefit of suffering humanity. My term of service expires with this meeting, and I am in a position to speak both feelingly and authoritatively. I am the advocate of no candidate, not in any sense interested in any special candidate, but I do love the Medical Society of the State of North Carolina, having by its courtesy and partiality secured the highest honors within its gift, and wish to see increased and perpetuated the high standard required of its licentiates, which has greatly earned for the Board of Examiners of North Carolina an enviable reputation in all the States of this Union. We need men of known professional standing and ability, possessing a due sense of the responsibilities and duties of this office, and with sufficient firmness, or *back-bone*, if you please, to reject all unfit applicants, even though the applicant should be a son of his nearest friend or dearest relative.

The President announced that nominations were in order for the two members of the Board of Medical Examiners to serve for two years.

Dr. G. T. Sikes said that he would nominate a man who will exactly comply with the resolution which Dr. Cobb had just read, a man not large enough to do it by force but sufficiently competent to do it by skill. And the man is Dr. T. S. McMullan.

Dr. J. T. J. Battle rose to propose the name of a man who has the courage to act his convictions, a man of capability and if he should reject a candidate he could approach him so pleasantly that the candidate would be glad to meet him. He then presented Dr. J. C. Walton.

Dr. Harris moved that the rules be suspended and the secretary cast the vote of the society for Dr. T. S. McMullan of Hertford and Dr. J. C. Walton of Reids-

ville for members of the Board of Medical Examiners to serve for two years.

Dr. Thos. E. Anderson, secretary of the Board of Examiners made his report which was adopted.

Dr. J. T. J. Battle presented a paper on "Hypertrophy of the Pharyngeal Tonsil and its treatment" which was discussed by Drs. Walton and Galloway.

Dr. C. A. Julian read a paper on "Automatism" which was discussed by Dr. Fletcher.

Dr. D. S. Morrill read a paper on "Should Physicians supply medicines they Prescribe." Discussed by Dr. O'Hagan.

Dr. J. B. Smith presented paper on "Gall Stones with report of case."

Dr. A. G. Carr then read a paper on "Emergencies in Obstetrics" which was discussed by Drs. Stamps, Weaver, Marsh, Morehead, O'Hagan, when the further discussion was postponed as the hour had arrived for the conjoint session with the State Board of Health.

The conjoint session was opened with an address by Dr. O'Hagan, President pro tem.

The secretary, Dr. R. H. Lewis, then read his report which was adopted and ordered printed in pamphlet form for distribution.

Society adjourned to meet at 2:30 P. M.

Second Day—Afternoon.

The Society was called to order at 2:30 by the President.

The committee on nominations made their report which was adopted.

Dr. E. T. Dickinson presented a paper on "Abortion."

The discussion of Dr. Carr's paper, postponed from the morning session was taken up by Drs. Staunton, Summerell, Oscar McMullan, Julian, and was closed by Dr. Carr.

The Society then went into the election of officers for 1901.

Dr. Julian M. Baker, of Tarboro, was nominated for President by Dr. McMullan and on motion of Dr. Lewis the rules were suspended and the Secretary cast the vote of the Society for Dr. Baker.

Dr. M. H. Fletcher, was nominated and unanimously elected 1st Vice-President; Dr. C. A. Julian, of Thomasville, 2d Vice-President; Dr. D. A. Stanton, of High Point, 3d Vice-President; Dr. E. M. Summerell, of Mill Bridge, 4th Vice-President.

Dr. G. T. Sikes was re-elected Treasurer, and Geo. W. Pressly, Secretary.

Ballot was then taken on the place of next meeting, and Durham was selected and the choice made unanimous.

The time was left with the Local Committee of Arrangements, the President and Secretary.

Dr. J. T. Beall, of Linwood, was made an Honorary Fellow of the Society.

Dr. Carl V. Reynolds presented a paper on "Tuberculosis," which was discussed by Drs. Weaver and Dunn, and closed by Dr. Reynolds.

The question of the necessity of an official organ of the Society came up for discussion.

Dr. W. L. DUNN.—Pointed out the injustice to the other medical journals of the State that one should be adopted as the official organ of the Medical Society and moved that the Medical Society of the State of North Carolina recognize no journal as its official organ. This motion was seconded by Dr. McMullan.

DR. LONG.—I have been a member of the Society more years than I can hope to be in the future, I have the highest consideration and respect for every member of the North Carolina Medical Society and I have aspired to deserve and hope to deserve in the future even more than in the past this respect, but I would have been glad if this question could have been brought up when there was a fuller meeting because I recollect the struggle of this body more than 20 years ago when it went from place to place and found a lodgement in the homes and affections of the people from the gorges of the mountains of the west to the cypress swamps of the east and I knew Dr. Wood who edited the N. C. Medical Journal, for it existed before the war and I have some copies of it in my library. Dr. Wood was a man of merit and gave us as good a journal as a man could give in North Carolina in his day for the same amount of money. We do not know how many medical journals are going to spring up in North Carolina in the next quarter of a century. Of course this Society has got to be kept alive by the young men so that the generation that is to follow may look on our work and think well of it, but above all, whatever we do, it should always be characterized by moderation and justice so that we ourselves will think well of what we have done. Now I say this because I have no objection to the motion in the world, the only thing about it is I would like to have a larger body present and then there would have been no grounds for complaint. I am sure I do not mean to question the motive of anybody, far would it be from me, but I do not see any great urgent necessity for acting in a hurry. If those who represent that journal and the friends of it were present or had an opportunity to be present

and you passed it our duty would be to acquiesce but if we take action where this has been in existence for a quarter of a century it seems to me our conduct might be misconstrued. I hope you will think about it and I am sure you will do what you think is right and proper.

DR. REGISTER.—I think the official organ as it now exists is entirely unnecessary. It gives an advertising advantage, and I think it unfair and I would favor this movement. I appreciate what you say about having a representation here. The official organ of the Society should certainly be represented.

DR. LONG.—If the Charlotte Medical Journal, or any medical journal, had been endorsed for 25 years by this Society, and the present journal was to ask for it to be discontinued I would feel that we ought to proceed in such a way as not to leave anything like a reflection on it. That is all that I wish, I have no interest in it one way or another, but I have followed it through its ups and downs to the present, and if it is the wisest and best for this Society to abolish that rule and wipe it from the record, why do it. All that I am pleading for is to proceed in such a way as not to offend any unit of this Society, or the Society collectively. I am just as much interested in anybody that represents any journal and in their welfare, and the Society is and ought to be, but we can not afford to hurt any of our units or leave anything like a sting.

DR. MARSH.—I rise to say that you express the feeling of the masses of the Society and at the same time it would be more satisfactory to set an hour for this question to come up to-morrow morning, or immediately after supper and let us have a free and full discussion of the question and settle it in the best way. So far as I am concerned my wishes are for the good of the Society, I would regret very much to be a party to any action that would cause any friction or feeling in the Society, and I would like to offer as a substitute to the doctor's motion, that this motion be brought up immediately after supper.

DR. R. H. LEWIS.—I would like to know what is up?

DR. LONG.—There is a motion to abolish the relationship of the Society to the Carolina Medical Journal as its official organ, and it received a second, and now we have an amendment offered to that motion, postponing the matter until to-night, until just before the annual essay, and the amendment has received a second. The same thing was brought up at Charlotte.

DR. REGISTER.—I think all of the journals of the State should be on an equal footing.

DR. R. H. LEWIS.—It seems to me that it would not be fair to take action now. I think the suggestion that it be postponed to a definite hour a good one. What we desire to avoid above all things is factional strife, and we must do everything we can to prevent it. It seems to me that the motion is the right thing, except that instead of being the first thing it should come between the essay and the oration, so I would endorse the amendment to postpone for further consideration until immediately after the reading of the essay to-night.

DR. SIKES.—I feel very much like quite a number of you gentlemen feel about it, and that is to take any action upon any matter of very considerable importance when the friends of the matter were not present looks like we were trying to take undue advantage of them, and the North Carolina Medical Journal has not a single representative here to-day, so far as I know, and I think it would be better if the gentleman who introduced this resolution would bring up a written resolution and let it lay over until one day during the meeting next year. There is not the slightest doubt in my mind as to how the matter will be settled, yet I do not think we ought to take unfair advantage of a weaker organ. I do not think we ought to have an organ, but at the same time I do not think this would be treating the journal exactly fair.

DR. DUNN.—I am very heartily in accord with the idea of considering this question when there is a fuller attendance than at present. I expected to put the motion this morning, and I am most thoroughly in accord with the amendment and the substitution as offered for consideration when there is fuller attendance.

DR. R. H. LEWIS.—I offer as an amendment the postponing of this matter until 10 o'clock on Wednesday of the next annual meeting, when everybody will be present and it may be considered. We have two journals in our State of equal value, and I do not like to have any favor, and at the same time those of the older members who remember the labors of Dr. Thomas Wood naturally have some sentimental feeling about it. Still in the interest of fairness and harmony, and to prevent these factional fights, I think we should give full notice when the members of the Society will be present, and then nobody can complain.

DR. MARSH.—I withdraw my amendment in favor of Dr. Lewis.

DR. REGISTER.—I am in favor of

Dr. Lewis' motion, that this matter be postponed until 10 o'clock on Wednesday of the next meeting.

DR. CARR.—I introduced a motion like this in Charlotte once and they told me I would have to put it by a resolution.

Dr. R. H. Lewis then put the following resolution:

Resolved, That the consideration of the question of the abolishment of the Carolina Medical Journal, as the official organ of the Medical Society of the State of North Carolina, be made the special order for 10 o'clock on Wednesday of the next annual meeting of the Medical Society. Carried.

The committee on the President's message made their report which was on motion accepted.

On account of the illness of the writer, the paper of Dr. C. M. Hazen was referred to the Committee on Publication.

Several papers, in the hands of the Secretary, the authors being absent, were referred to the Committee on Publication.

The Society then adjourned to meet at 8:30 P. M.

Second Day—Evening.

The Society was called to order by the President at 8:30 o'clock.

Dr. R. H. Whitehead, of Chapel Hill, presented the Annual Essay on "The Relation of Bacteria to Disease."

Dr. T. S. McMullan then delivered the Annual Oration on the subject, "Watchman, Tell us of the Night."

The travelling men of the city having exhibits in connection with the meeting presented to Dr. Julian M. Baker, Chairman of the Local Committee of Arrangements, a very handsome case of surgical instruments.

On motion of Dr. Lewis the Society went into the installation of officers.

The President appointed Drs. W. H. Whitehead and R. S. Young to escort Dr. Baker to the platform.

The retiring President, Dr. Geo. W. Long, welcomed Dr. Baker to the chair in a few chosen words, and expressed his thanks to the people of Tarboro for the hospitality of their homes and hearts shown the Society.

President Baker thanked the Society for the honor conferred on him, and asked the co-operation of all members in maintaining the high standard of work of the Society.

It was moved that the President be allowed to appoint his committees for the coming year and announce them later. Carried.

On motion by Dr. Sanderford, a vote of thanks by the Society was extended to the

citizens of Tarboro for the cordial way in which the Society was entertained.

The Society then adjourned *sine die*.

QUESTIONS ASKED BY THE BOARD OF MEDICAL EXAMINERS.

Examination on Surgery.

By D. T. TAYLOR, M. D., President.

1. What are the causes of Gangrene? Name the two commonest forms. (a) What structures resist Gangrene, and what are the general indications in the treatment of all Gangrenous processes?

2. What are the general principles of antiseptic treatment, and what is the distinction between antiseptic and aseptic?

3. What period of time is occupied by the various processes necessary for the repair of fracture:—(a) What complications are common to all fractures? (b) What compound fractures require amputation? (c) In what fractures is the union ligamentous?

4. What are the causes and symptoms of strangulated hernia, and where is the seat of constriction? (a) How do you treat strangulated hernia?

5. Under what circumstances may careful sounding fail to detect stone? (a) How may vesical calculi be treated, and what circumstances guide you in the choice of operation?

6. Give the classification of aneurism. What are the causes, diagnostic signs and treatment of aneurism?

7. What symptoms are common to all shoulder luxations? Give the differential diagnosis between fracture of the surgical neck of the humerus and luxation about the shoulder joint.

8. What are the causes and give some varieties of organic urethral stricture? (a) What constitutional effect may follow the passage of an instrument?

9. In what situation may abscess of the breast occur? Give the treatment of mammary abscess.

10. What is the distinction between excision and resection? Describe the common form of club-foot.

Section on Practice of Medicine.

By WM. H. H. COBB, M. D., Goldsboro, N. C.

1. Define Hepatic Colic, Nephritic Colic, Lead Colic, and Uterine Colic. Give brief treatment for each.

2. Give symptoms and treatment of Ulcers of Cornea. What is meant by Apnea, Dyspnoea, Dysphagia, Dystocia?

3. Define Hæmoptysis, Hæmatemesis and Epistaxis. How would you distinguish between them? How would you treat them?

4. Give pathology and treatment of Capillary Bronchitis.

5. Differentiate between Variola and Varicella. (a) Describe method of vaccination. (b) When and how often should it be done? (c) Would you advise against it in any case? If so state cases.

6. State Medicinal and Dietetic treatment for Constipation and Diarrhœas in children.

7. Give Widal's test for Typhoid Fever. How would you treat hemorrhage in Typhoid Fever? Give general hygienic management of a case.

8. Enumerate some of the diseases in which the nucleins and serums have been employed with success. Give physiologic action in such diseases.

9. Mention briefly the treatment for Pertussis, Parotiditis, Spasmodic Laryngitis, Singultus. Write in full 2 prescriptions for each.

10. What is the difference between Phrenitis and Nephritis?

Materia Medica and Therapeutics.

By E. C. REGISTER, M. D.,

Charlotte, N. C.

1. Name the Mineral Acids used in Medicine and their doses.

2. What uses are made of Permanganate of Potassium?

3. Describe the cathartic action of Aloes and when it should not be given.

4. How would you treat a case of Poisoning by Corrosive Sublimate and what would you consider a dangerous dose?

5. Give symptoms of Belladonna poisoning.

6. Give the physiological action of Jaborandi.

7. Describe the effects of Nitroglycerine on the circulation.

8. What does the Compound Tincture of Cinchona contain?

9. What substances are incompatible with the Silver Salts?

10. Name the two Glucosides of Convallaria and compare them physiologically.

Chemistry.

By DR. K. P. BATTLE, Jr., Raleigh, N. C.

1. Give the properties of oxygen.

2. Give the most handy antidotes for mineral acids and explain why they are useful.

3. Explain the difference between a chemical and a bacteriological examination of

drinking water and state their relative importance.

4. What are the properties of hydrochloric acid?

5. Explain the difference between a faradic and a galvanic electric current.

6. What are tinctures and how are they made?

7. What are carbohydrates? Give example.

8. Explain the difference of action of organized and unorganized ferments and give an example of each.

9. Give the differences between carbon monoxide and carbon dioxide.

10. What is wrong with the following prescription?

R. Potas. chlorat. Drams, one.

Syr. simp. Drams, two.

Aq., Ounces, four.

Sig. Gargle.

Anatomy.

By DR. J. HOWELL WAY, Waynesville, N. C.

1. Describe the vomer and give its articulations.

2. Describe the external surface of the ilium.

3. Describe the temporo-mandibular articulation.

4. Describe the pronator muscles of the fore-arm.

5. Give the relations of third portion of axillary artery.

6. Locate and describe the femoral artery.

7. Describe the ophthalmic division of the fifth cranial nerve.

8. Describe the urinary bladder and give its relations.

9. Locate and describe the vermiform appendix.

10. Name in their proper order the coverings of direct inguinal hernia.

Physiology.

By THOS. E. ANDERSON, M. D., Statesville, N. C.

I. What do you understand by the term "Metabolism?"

II. Where and how is water absorbed when drunk? Where and how is Peptone, Fat, Sugar absorbed. Is absorption a vital act? Explain.

III. Explain how the normal Cardiac Sounds are produced.

IV. Describe the structure of a Malpighian Corpuscle of the Kidney. State its functions and the theory of its action.

V. What is the mode of production of heat in the body?

VI. Explain phenomena of sweating. Is it weakening? What part does the skin play in heat regulation?

VII. State where in the human economy the following substances are found: Fibrin, Mucin, Chondrin, Leucin, Hippuric Acid.

VIII. The interchange of what Gases occur in respiration? (a) Is this effected by the law of diffusion of Gases or chemical action, or both? Explain. (b) What is the effect on Hæmoglobin when an animal is made to breathe pure oxygen?

IX. What is the function and distribution of the Pathetic (4th Cranial) Nerve? also its foramen of exit?

X. Give physiological arrangement by which hearing is accomplished.

Pediatrics, Obstetrics and Gynecology.

By DR. ALBERT ANDERSON, Wilson, N.C.

Pediatrics.

I. What are the differences between human milk and cow's milk, and how are they overcome in infant feeding?

II. INFANTILE SCURVY: Its principal causes, age when it appears, important symptoms and treatment?

III. Incubation of Measles, Scarlet Fever, Mumps and Chicken-Pox.

IV. How would you disinfect a room after Scarlet Fever?

V. Symptoms and treatment of Catarrhal Croup.

Obstetrics.

I. Give the anatomy of the Uterus.

II. Describe the Mechanism of labor in a R. O. P. position of a vertex presentation.

III. Define placenta previa; give the varieties, symptoms and treatment.

IV. What are the premonitory signs and symptoms of puerperal eclampsia? How would you treat such a condition?

V. Give the etiology and treatment of postpartum hemorrhage.

Gynecology.

I. What are the functions of the ovary, of the endometrium, and of the cervix uteri?

II. Give the ligaments and attachments of the uterus.

III. Is the ovary an extraperitoneal or an intraperitoneal organ?

IV. Give the symptoms of acute gonorrhæal endometritis.

V. Describe the operation of curettage for septic endometritis.

VI. Describe one accepted method of vaginal hysterectomy.

Report of the Committee on the President's Address.

Your committee appointed to report upon

the President's excellent and practical address respectfully beg leave to cordially endorse his recommendations and to suggest the adoption of the following resolutions:

Resolved, That Anatomy being one of the fundamentals of medicine and surgery and the proper teaching of that branch being impossible without dissections of the human body, arrangements should be made for providing subjects to our medical schools. That to secure that end the Committee on Legislation be requested to use its best efforts to obtain the enactment by the next General Assembly of a suitable dissecting law.

Resolved, That in view of the fact that vivisection is necessary to the scientific study of medicine and is responsible for many of the wonderful advances of modern medicine, the Medical Society of the State of North Carolina earnestly protests against any restrictive legislation on this line and it requests our Senators and Representatives in Congress to oppose, in the interest of science and humanity the Gallinger bill now pending in the Senate of the United States.

Resolved, That no health board can do really effective work without the cordeal co-operation of the family physician; and we call upon not only our own members but every medical man in North Carolina to heartily support the efforts of all health officers to protect the public health, and in addition instruct the families belonging to the clientele in the elementary principles of hygiene.

R. H. LEWIS,
W. C. GALLOWAY,
J. L. NICHOLSON.

Report of the Obituary Committee.

The Obituary Committee made the following report:

DR. E. H. HORNADAY.

Prepared by Thos. M. Jordan, M. D., of Raleigh, N. C.

The subject of this sketch, in the common acceptance of the term, was neither brilliant nor great.

Yet, when we remember that to be great is to be good, and to be brilliant is to be thorough, he was both.

Dr. Hornaday, as husband and father, was in every particular loyal and true, and his home was as happy as love could make it.

His wife after a protracted illness died June the 27th. 1891, and while bowing in all the submissiveness of a true Christian to this bereavment, to use his own words, he surrendered all desire to remain longer on earth, and constantly prayed, that as

soon as it might please the Master, he might follow her whom he loved.

Just one year previous to his death he called the attention of the writer to the place where he desired to be buried, said that his wife could be removed and placed beside him: remarking at the time, "I camped on this very spot during the war and I want to be buried here when I die."

That the summons was a welcome message to him there is no doubt. Dr. Hornaday was born April 4th. 1838, and grew up to manhood in Chatham Co. N. C. He attended school at Guilford college N. C.

His first occupation was teaching and in Wayne Co. he spent his early manhood in this work. He read medicine and attended a course of lectures but was interrupted in the pursuit of his studies by the Civil War through which he passed. He followed the Confederate flag from the beginning to the end. At the close of the war he completed his medical course, and graduated from the college of Physicians and Surgeons in Baltimore. Returning to Goldsboro he entered into practice in partnership with Dr. Geo. L. Kirby, but an opening in Greene Co. for a physician being presented to him, he removed to that point, where he spent the remainder of his days, devoting his whole time to the demands of his profession, for which his devotion was second only, to that for his family.

He was a student for the sake of knowledge, and to increase his usefulness to his patrons, whom he served with a belief that to be faithful to them was to serve the "Great Physician."

As a practitioner he was conscientious and painstaking, bestowing attention alike to all who came under his treatment.

His patronage covering a large area, his life was active, and up to within a few years of his death his health was almost perfect, and so sympathetic was his nature that the night was never too dark, the weather too cold, nor the road too long for him, when suffering humanity claimed his assistance. The ideal "Country Doctor," battling alone with that grim monster, Death, too far away to obtain consultation, lacking the modern conveniences for combatting disease, relying upon his own resources, and trusting in his God, excites the admiration of all people and is justly denominated a hero among, as well as a benefactor to, mankind. All this was exemplified in the life of Dr. E. H. Hornaday, who, on the 20th. day of March 1900, as he was in the act of getting in his buggy to visit a patient dropped dead while in harness so to speak. Since 1878, he had

been a member of our Society, and until recently was a constant attendant at its meetings. In 1881, he read a paper upon Ainhum, a very rare disease, coming under his observation. The article was copied by various medical journals, and brought numerous letters of inquiry from several leading surgeons. His advice was often sought outside of professional lines, but persistently he refused to encumber himself with any matter that conflicted with his regular work.

He was a consistent member of the M.E. Church and died relying on the promises of the Father.

"None knew him but to love him,
"None named him but to praise."

ROBAH F. GRAY, M. D.

Dr. Gray was born December 24th, 1852. He received his classical education at the Randolph-Macon College, and graduated in medicine at the Louisville Medical College and at Bellevue, New York. After practicing in Winston for a few years he removed to Danville, Va., but in two years returned to his old home. After a lingering illness, nearly a year of which was spent in hospital, he died March 5th, 1900. He married Miss Lelia Wilson, of Danville, who survives him with seven children.

Dr. Gray was wholly devoted to his profession; he never refused a call; day and night he was ready to respond to any demand made upon him by the sick and suffering. In his relations with the afflicted he was gentle, untiring and devoted, and his numerous patients adored him. He had probably the largest practice in Forsyth county; knew no rest or recreation, and died a martyr to overwork in behalf of others.

JOHN H. TUCKER, M. D.

Dr. Tucker was born in Brunswick county, Va., October 27th, 1842. He was educated at Hanover Academy, William and Mary College, and the Virginia Military Institute. From the last named he enlisted in June, 1861, as a private in the third Virginia cavalry. After a faithful service of twelve months he was honorably discharged on account of physical disability, and resumed the study of medicine, which he had already begun during his collegiate course. In the spring of 1864 he was graduated from the Virginia Medical College, and immediately re-entered the Confederate service as assistant surgeon, being assigned to the Chimborazo hospital at Richmond, Va. In September, 1864, he was commissioned assistant surgeon in the Confederate navy, serving on the gunboat Pee Dee until the fall of Charleston. He was then sent to the

Marvin hospital at Drewry's Bluff, where he was captured in the spring of 1865.

After the close of the war he went to Okolona, Miss., where for seven years he was engaged in active practice and in farming. In 1872 he married Miss Willie Hill, a noted belle of Eastern North Carolina, and two years later made his home in Henderson. In July, 1897, he had a severe attack of illness from which he never recovered, although after a winter in Florida and a summer in the mountains, he resumed his practice to a limited extent. He died February 24th, 1900, at the age of 58, leaving a wife and six children, one a promising physician of the same name.

In his profession, and in the State Medical Society, he was an honored leader. From June, 1887, to May, 1893, he was a faithful member of the State Board of Health, and in 1895 he was President of the Society.

The esteem and affection in which Dr. Tucker was held by the people of Henderson, and by all who knew him well, was extraordinary. In all the walks of life, as husband, father, physician, Christian, citizen and man, he was a model. Hospitable, unobtrusive, unselfish, courteous, refined, gentle but strong, he was a noble type of the true southern gentleman.

WILLIAM R. WOOD, M.D.

Dr. Wood was born in Washington county in 1834. He received his medical education in Philadelphia, and settled at Palmyra, Halifax county. On the outbreak of the war he entered the army as Lieutenant in Company B, First North Carolina Cavalry. He was promoted the next year to Captain of Company G, holding that position till the battle of Gettysburg, when he was wounded in the shoulder, after which he entered the medical department and rendered faithful service till the end.

About 1859 he was married to Miss Mary Daughtry, of Gates county, who lived only about one year. In 1862 he was married to Miss Henriette Anthony, of Scotland Neck. Of this marriage there were two children, a girl, who died in childhood, and a boy, who became a lawyer of promise, but died in early manhood. He suffered the loss of their mother also, and for several years was the last of the family.

At the close of the war Dr. Wood established himself at Scotland Neck and for many years was one of the leading practitioners in his section of the State. He became a prominent member of the State Medical Society, and from 1884 to 1890 was a member of the State Board of Examiners, serving as its President. In 1890

he was elected Superintendent of the State Hospital at Raleigh, then known as the North Carolina Insane Asylum. He resigned in 1895 on account of the failing health of his wife and returned to his practice.

Dr. Wood did not confine his activities to his profession. He was for some years the Chairman of the County Board of Commissioners of his county and took interest in the welfare of his community, his party and his State. He died July 11, 1899.

W. C. McDUFFIE, M.D.

Dr. McDuffie was born in Cumberland county February 10, 1829. After completing the course at the Summerville Academy he entered the medical department of the University of New York and graduated in 1855. He practiced medicine throughout life at Fayetteville, with the exception of the time spent in the Confederate army, in which he held the rank of Brigade Surgeon.

During his long professional career he was one of the leaders among the exceptionally able group of physicians of the upper Cape Fear. He was successful in many lines of activity. Prominent in the State Medical Society, he served as its president in 1884. For six years he acted as chairman of the magistrates of the county and afterwards was Chairman of the Board of County Commissioners, was County Physician and Superintendent of Health for sixteen years, held high position among the Confederate Veterans, was many years local surveyor of the Atlantic Coast Line Railway, was examiner for many life insurance companies, was a Knight of Pythias and an Odd Fellow and was much interested in the material prosperity of his community.

Dr. McDuffie married Miss Catherine E. Dodd in 1858, and the union was blessed with three sons and two daughters. Toward the close of his life he was called upon within the space of two years to bear the loss of his wife and two sons, one a promising physician and the other a prosperous druggist. Mr. E. B. McDuffie, of New York, Mrs. N. E. Bunting and Mrs. C. M. Glover survive him. He died October 31, 1899.

K. P. BATTLE, Jr., Ch'm.
P. L. MURPHY,
G. W. PUREFOY.

Report of the Board of Medical Examiners.

The Board of Medical Examiners having completed its work desires to submit the following report: Our registration list

shows that the number applying for license was 79

These 79 applicants held diplomas from 30 different medical colleges and institutions, distributed as follows:

University College of Medicine of Richmond, Va.,	12
University of Maryland,	10
Southern Medical of Atlanta,	5
North Carolina Medical College,	5
Medical College of Virginia,	4
Medical College of South Carolina,	4
College of Physicians and Surgeons of Atlanta,	4
University of Pennsylvania,	3
Baltimore Medical,	3
University of Tennessee,	3
Woman's Medical College of New York,	2
University of Nashville,	2
Jefferson Medical College,	2
Tennessee Medical College,	2
Chattanooga Medical,	2
Leonard Medical,	2
Central Medical of Tennessee,	2
Syracuse Medical of New York,	1
Starling Medical of Ohio,	1
Georgetown University,	1
Columbian University of Washington,	1
Harvard University,	1
University of Colorado,	1
College of P. and S., of Ontario,	1
Kentucky School of Medicine,	1
Medical Department of University of Georgia,	1
College of P. and S., of New York,	1
University of Michigan,	1

Of these 79, 25 failed, 2 withdrew, 52 were successful and duly clothed with authority to enter upon their professional career in this State.

Those licensed are as follows:

Elizabeth Delia Dixon, Raleigh; Sallie Borden, Goldsboro; Lucy C. Jones, New York City; J. Ernest Stokes, Salisbury; Robt. B. Miller, Goldsboro; W. C. Kluttz, Salisbury; J. T. Shaffner, Jr., Salem; Edward Baum, Greensboro; R. M. West, Salisbury; J. C. Green, Greenville; G. G. Bell, Elizabeth City; G. E. Price, Sapphire; S. E. Ballard, Sagnaw; J. S. Bufalo, Gardner; George M. Pate, Gibson; Wade H. Bynum, Germanton; W. Henry Stratford, Greensboro; Neill MacRae, Fayetteville; L. B. Evans, Idaho; J. E. Patrick, Institute; W. F. Fortune, Greensboro; G. L. Sikes, Clinton; G. S. Watkins, Cornwall; D. R. Bryson, Bryson City; J. C. Wessell, Wilmington; Sam'l Edwards, Goldsboro; W. C. Melvin, Winnie; A. C. Hoyt, Washington; E. J. Nixon, Wilmington; L. D. McPhail, Clinton; Raymond Pollock, Kinston; J. F. Hunt, Fallston; H.

G. Powell, Fair Bluff; H. F. Glenn, Gastonia; Gaylord Worstell, Cherokee; W. E. Reid, Gatesville; B. H. Henderson, Fayetteville; G. H. Hines, Smithfield; B. J. Witherspoon, Charlotte; Chas. H. C. Mills, Charlotte; Edgar H. Earl, Rochester, N. Y.; George W. Brown, Covington; G. V. Cloninger, Stanley; Wm. H. Houser, Shelby; Lem Watson, Broadway; R. S. Cromartie, Garland; W. H. Moss, Charlotte; W. F. Mitchell, Shelby; J. W. Fauntleroy, Saluda; W. A. Newman, Salisbury; Wm. L. Dunn, Asheville; W. J. Thigpen, Conetoe.

This is the first examination held under the amended law, requiring graduation from a medical college of not less than a three-year term. The highest mark attained was made by the two first ladies at the head of the list. D. R. Bryson, of Bryson City, led the male contingent and secured 92 4-7.

Of the 25 rejected, four held diplomas from the Southern Medical of Atlanta, two from the University College of Medicine of Richmond, two from the College of Physicians and Surgeons of Atlanta; two from the Tennessee Medical, two from the Chattanooga Medical, and one each from the Starling Medical College of Ohio, Medical College of Virginia, Georgetown University, North Carolina Medical, University of Nashville, University of Maryland, Medical College of Tennessee, University of Colorado, University of Georgia, and Medical College of South Carolina.

Respectfully submitted,

THOS. E. ANDERSON,
Secretary Board of Medical Examiners.

Report of the Committee on Nominations.

Orator—Earle Grady, Tryon.

Essayist—R. S. Primrose, Newbern.

Leader of Debate—D. A. Stanton, High Point.

Committee on Publication.

J. C. Montgomery, Charlotte.

R. L. Gibbon, “

George W. Pressly, “

Obituary Committee.

D. J. Hill, Lexington.

W. T. Cheatham, Henderson.

J. C. Rodman, Washington.

Delegates to American Medical Association

Chas. O'H. Laughinghouse, Greenville.

H. B. Weaver, Asheville.

Julian M. Baker, Tarboro.

Charles L. Pearson, Asheville.

J. P. Munroe, Davidson.

Charles S. Mangum, Chapel Hill.

W. H. H. Cobb, Goldsboro.

Delegates to South Carolina Medical Society.

C. M. Poole, Craven.
J. L. Edgerton, Hendersonville.
David Bullock, Wilmington.
A. H. Harris, "

American Public Health Association.

H. H. Harris, Wake Forest.
S. W. Battle, Asheville.
P. L. Murphy, Morganton.
G. G. Thomas, Wilmington.

Virginia Medical Society.

H. H. Dodson, Milton.
J. W. Long, Salisbury.
R. H. Stancil, Margarettesville.
R. H. Whitehead, Chapel Hill.
B. K. Hays, Oxford.

H. W. LEWIS,
J. A. BURROUGHS,
W. C. GALLOWAY,
WILLIS ALSTON,
CHAS. A. JULIAN,
Nominating Committee.

The Appalachian National Park.

The following resolution was introduced during the conjoint session of the Society and the State Board of Health and it was passed unanimously:

To the Senate and House of Representatives of the United States of America:

WHEREAS, It having come to the knowledge of The North Carolina State Board of Health and The North Carolina State Medical Society that there is now a movement on foot under the auspices of the Appalachian National Park Association for the establishment of a National Park and Forest Preserve in the Southern Appalachian Mountains, preferably in the Western North Carolina Section or adjacent States, to be known as the Appalachian National Park, and

WHEREAS, Those interested in this movement having presented a Memorial to Congress of the United States praying for the appointment of a Commission to investigate the practicability, feasibility and necessity of establishing such a Forest Reservation and Park in the Southern Appalachian Mountains, and

WHEREAS, The Committee on Agriculture, of the Senate, to whom this matter was referred, having reported back to the Senate favorable upon the appointment of such a Commission, and the Senate of the United States having passed the Amendment as reported by the Agricultural Committee, and

WHEREAS, We believe that the cause

of this Association is one deserving of the most careful attention at the hands of the Government; therefore be it

Resolved, That the North Carolina State Board of Health and the North Carolina State Medical Society endorse the movement of the Appalachian National Park Association, and that we earnestly urge the Senate and House of Representatives of the United States to obtain the careful investigation and report as requested in the Memorial set forth by the Appalachian National Park Association.

Report of the Committee on Credentials.

The Committee on Credentials reported favorably on the following persons who were admitted to membership into the Society:

W. N. Tate, Mebane.
H. Hartwell Bass, Henderson.
E. F. Corbell, Sunbury.
S. E. Koonce, Pollocksville.
L. L. Staton, Tarboro.
E. J. Buchanan, Lexington.
R. E. Lee, Clinton.
W. W. Dawson, Grifton.
C. F. Griffin, Woodland.
R. P. Morehead, Lasker.
A. R. Winston, Franklinton.
Raymond Pollock, Kinston.
Isaac W. Lamm, Lucama.
Elizabeth Delia Dixon, Raleigh.
Sallie Borden, Goldsboro.
Edmund Harrison, Greensboro.
Wade H. Bynum, Germanton.
J. B. Person, Jr., Selma.
E. T. Dickinson, Smithfield.
J. R. Palmer, Hookerton.
W. L. Dunn, Asheville.
L. Harrell, Statesville.
Paul Paquin, Asheville.
J. E. Patrick, Institute.
J. C. Wessell, Wilmington.
E. J. Nixon, Wilmington.
A. C. Hoyt, Washington.
J. W. Tayloe, Union.
J. W. Wood, Scotland Neck.
B. F. Halsey, Roper.

The following delegates and visitors were welcomed and extended the courtesies of the floor:

Joseph H. Branham from Maryland.
E. F. Darby from South Carolina.
Southgate Leigh from Virginia.
Randolph Winslow from Baltimore.
F. A. Ashby from Baltimore.
H. C. Spruell from Baltimore.

JULIAN M. BAKER,
L. J. PICOT,
R. H. WHITEHEAD,
Committee.

Report of Finance Committee.

1899.		
May 30th.	To balance on hand.	307.71
June 2d.	Amount collected.	624.00
Nov. 3d.	" "	184.00
1900.		
May 21st.	" "	62.00
Total.		\$1177.71
1899.		
June 1st.	Paid Dr. Geo. W. Pressly.	157.49
" 2d.	" " R. D. Jewett.	376.00
" 2d.	" Stenographer.	50.00
" 2d.	" Dr. G. T. Sikes.	100.00
Aug. 17.	" " Geo. W. Pressly.	5.00
Sept. 30.	" Postage.	4.72
Nov. 3.	Paid Observer Pt'g. House.	301.55
" 8.	Stationary.	2.00
1900.		
Jan. 2.	Observer Pt'g. House.	50.00
May 19.	Postage, etc.	2.26

Total Expenses. \$1050.00

May 21st. To balance on hand. \$127.71

We recommend the usual assessment of \$2.00 per capita; that the salary of the secretary be \$125.00 and that of the treasurer \$100.00. We recommend that a stenographer be employed at a maximum salary of \$25.00

C. M. POOLE.

M. H. FLETCHER.

M. P. PERRY.

Committee.

MISCELLANEOUS.

Why I Use Pepto-Mangan "Gude." An Experimental Demonstration.*

Some five years ago I wrote a paper for the Memphis Medical Monthly, giving a resume of the evolution of the iron compounds, and appended a report of cases giving blood counts, etc. The manufacturers of the preparation I preferred saw fit to reproduce the case reports in their pamphlets, but said nothing about the reasons that induced me to prefer their product.

At a recent joint meeting of physicians and pharmacists I was criticised for opposing the use of ready-made compounds, while still advocating the use of Pepto-Mangan "Gude," which is a proprietary preparation. I hesitated considerably about bringing the matter up again, because I dislike to build up a reputation as an endorser, and have never in any other instance written an article endorsing a proprietary preparation.

I hope, however, to show you this even-

ing that there is no pharmacopœial preparation that meets the requirements of an ideal iron compound, and, until this is found, I intend to continue to use what has never disappointed me, and is not based upon mere faith. The work of Bunge is too well known to be now quoted, and I will only make a few experiments before you this evening and show the reasons for the faith that is in me. There may be other proprietary iron compounds, and doubtless there are, that will come up to the same requirements, but I see no advantage in swapping the devil for the witch.

It is not necessary to repeat all the tests with all the official iron preparations, because they are divisible into groups, all the salts of one group behaving very much alike toward the gastric and intestinal juices.

An ingenious theory recently put forward regarding the action of the mineral salts of iron is, that they decompose the substances in the intestinal tract which precipitate the food iron so that it may be absorbed. This is the only rational explanation of the fact that we do occasionally get results from them. On the other hand, it is far more rational to use an iron compound that can be, and is absorbed, for then we are reckoning with known quantities, instead of blundering along, giving more iron at a dose than is contained in the entire body, and incidentally deranging the digestive functions by precipitating the gastric, pancreatic and intestinal juices, and producing constipation by reason of the very astringent nature of some of the iron salts.

Beginning with the organic double salts, of which the scale salts are representatives, we notice upon the addition of this gastric juice, that a precipitate is formed; the double salt is decomposed and ferric salt remains which is insoluble, both in gastric and intestinal juice.

The tincture of ferric chlorid will precipitate some of the gastric constituents, though most of the iron will remain in solution in the hydrochloric acid; the iron still in solution will not be absorbed, because its non-diffusibility is taken advantage of in the manufacture of *dialysed iron*, the acid passing through the animal membrane; when the iron finally reaches the intestine, the alkaline carbonates promptly precipitate it. Ferrous sulfate behaves similarly. In both instances, as you see, the very insoluble ferric oxid is finally formed. If you have ever tried to remove iron stains from your water pitcher, you have some idea how insoluble it is.

The insoluble compounds, like reduced iron, or Vallet's mass, only serve to render

*Read before the Memphis Medical Society by Dr. Wm. Krauss.

inert the arsenic with which they are usually prescribed; if dissolved at all in the stomach, they are re-precipitated in the intestine.

Taking now Gude's preparation, we find it soluble, not only in all these reagents, but also in a mixture of them. Potassium ferrocyanid readily gives the iron reaction, excess of ammonia will separate it, redissolving the manganese, which is then recognized by the color of its fluid; the alkaline copper solution gives the reaction for pepton, showing that it is what the label says. It mixes with arsenious acid, forming a perfect solution, thus giving us a most useful hematopoietic agent. The soluble alkaloids are perfectly soluble in it, as is also mercuric chlorid. Being a pepton, it is readily diffusible by osmosis.

The only disturbing agent in the intestinal tract is hydrogen sulfid; this will precipitate it, but presumably, much of the iron must have been absorbed before it encounters this gas; if not, appropriate agents should be used for its elimination.

Therapeutically, it does not nauseate, constipate, discolor the teeth, precipitate the digestive agents, nor become inert from contact with them. As to the clinical results, I need not add anything to the many reports already on record.

Heroin.

The demands made upon a new remedy before its admission to a permanent place in the materia medica are now-a-days much more exacting than in the days of empirical pharmacy. Careful physiological experiments in the laboratory and accurate observations of its therapeutic action in large hospitals must precede its introduction. This is well illustrated in the case of Heroin. This remedy was submitted to the most careful experimental studies on animals by Professor Dreser, of Germany, and later by Medea, of Italy, Inpenn, of Belgium, and Ott, of America. These experiments, which are in complete accord, showed that the drug possessed a specific influence upon the respiratory apparatus, consisting in a reduction of the frequency of respiration with an increase of its force and volume. They further showed that heroin is much safer than the opium alkaloids, and that its action upon the respiratory organs is much superior to the latter both in promptness and efficiency. The popularity of heroin, therefore, rests upon a sure and scientific foundation. The numerous clinical reports that have appeared both in American and European literature coincide in assigning to this remedy a high

place in the treatment of broncho-pulmonary affections, both for the relief of cough and dyspnea. It is remarkable that in spite of the fact that the drug has now been used by thousands of physicians, and that it has been made the subject of a voluminous literature, that so few cases of ill-effects are on record. In only four cases were these effects deemed sufficiently noteworthy to deserve mention. Dr. Manges, who has made the most complete study of the therapeutics of heroin, as revealed both in the literature and in his own personal investigations, remarks, that after-effects are chiefly attributable to the use of excessive doses, and that they are much less common than from morphin or codein. This would show, therefore, that when employed in a rational manner, the dose being graduated according to the age and indications present in individual cases, heroin is superior in reliability and safety to any of the remedies which were in common use before its introduction.

Suprarenal Therapy in Hay Fever.

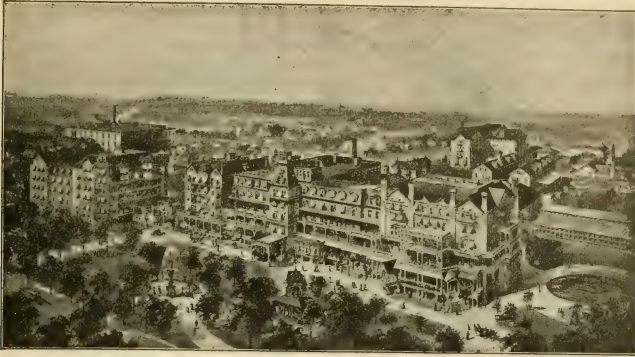
Extract of the Suprarenal Capsules is superior to all other remedies in the treatment of Hay Fever. It may be used both locally and internally. Locally, it should be applied in the form of an aqueous solution, 6 to 12 per cent. strong, by means of a spray; on pledgets of cotton, or by cataphoresis. Internally, in doses of 2 to 5 grains, the Extract of Suprarenal Capsules reduces the turbinate bodies, lessens the irritation, stops the sneezing and discharge, and controls the vaso-motor vessels of the nose. The extract should be given until giddiness or palpitation is observed, or until the nasal membrane shows that the vaso-motor paralysis is under control, when the dose should be diminished. If the disagreeable symptoms reappear, increase the dose until the patient is again comfortable.

The results from the use of Extract of Suprarenal Capsules in the treatment of Hay Fever, entitle it to be classified as a specific.

Physicians with patients troubled with Hay Fever should, by all means, give them the benefit of the Suprarenal Therapy.

Extract of Suprarenal Capsules in powder and tablets may be obtained from Armour & Company.

On April 24th the Senate Committee on Military Affairs, by a vote of 6 to 5, ordered an adverse report on the bill providing for the employment of women nurses in military hospitals of the Army.—*Medical News.*



The Battle Creek Sanitarium

Is a place where chronic invalids, especially those suffering from the various forms of indigestion, diseases peculiar to women, constipation, chronic malarial poisoning, anæmia, obesity, the uric acid diathesis, neurasthenia, migraine, and similar ailments are trained into health by the aid of systematic regimen, scientific hydrotherapy, massage, Swedish movements, Swedish gymnastics, and other rational means. Most cases of Bright's disease, diabetes, locomotor ataxia, and many other maladies which are incurable under ordinary conditions, are greatly improved by the combined use of rational remedies and systematic regime, and many are practically cured. Extensive bacteriological, chemical, and microscopical laboratories connected with the institution afford excellent facilities for accuracy in diagnosis and original research.

The Institution is conducted strictly within ethical lines.
For information concerning the facilities afforded, terms, etc., address

THE SANITARIUM, Battle Creek, Mich.

The views of Dr. W.W. Keen, professor of surgery in Jefferson Medical College, Philadelphia, on the operative treatment of typhoid perforation, may be summarized as follows: (1) The surgeon should be called in consultation the moment that any abdominal symptoms indicative of possible perforation are observed. (2) If it be possible to determine the existence of the preperforative stage, exploratory operation should be done under cocaine anesthesia before perforation, shock and sepsis have occurred. (3) After perforation has occurred, operation should be done at the earliest possible moment; provided (4) that we wait till the primary shock, if any be present, has subsided. (5) In a case of suspected but doubtful perforation, a small exploratory opening should be made under cocaine to determine the existence of a perforation, and if hospital facilities for a blood count and for immediate bacteriological observation exist, their aid should be invoked. (6) The operation should be done quickly,

but thoroughly, and in accordance with the technic already indicated. The profession at large must be aroused to the possibility of a cure in nearly, if not quite, one-third of the cases of perforation, provided speedy surgical aid is invoked.—*Amer. Jour. of Surg. and Gynecology.*

Chemical Foodis a mixture of Phosphoric Acid and Phosphates, the value of which Physicians seem to have lost sight of to some extent, in the past few years. The Robinson-Pettet Co., to whose advertisement (on page viii) we refer our readers, have placed upon the market a much improved form of this compound, "Robinson's Phosphoric Elixir." Its superiority consists in its uniform composition and high degree of palatability.

Examine for fish bones in the throat with the finger, since they are not always seen in the throat mirror.

Sanmetto Endorsed after Watching its Effects in Several Hundred Cases of Genito-Urinary Diseases.

It gives me great pleasure to add my testimony to that of the many eminent physicians in this city and elsewhere, attesting the wonderful curative value of Sanmetto. In nearly all genito-urinary ailments, especially of a chronic nature, it is simply invaluable. I consider Sanmetto almost a specific for chronic prostatitis, especially in old men, where more or less hypertrophy exists; also in weakness of the generative system, it has wonderful power in restoring wanting sexual strength. This is my first testimonial for any medicine, but having prescribed Sanmetto ever since its introduction to the profession, and watched its effects in several hundred cases, I feel that I need not hesitate to endorse it.

L. E. MILEY, M.D.,

Grad. 1881 Michigan University; Member American Med. Assn.; Member Illinois State Med. Assn.; Member Chicago Med. Soc.
Chicago, Ill.

Mr. W. B. Saunders wishes to announce the final accomplishment of a step that he has long had in mind. Feeling that the growth of the business to its present large proportions has been due, not alone to his own exertions, but quite as much to the efficient cooperation of a number of his employees, he had decided to give recognition to such service by associating with himself in business, under the firm name of W. B. Saunders & Company, Mr. F. L. Hopkins, Manager of the Subscription Department, and Mr. T. F. Dagney, Manager of the Publication Department. These gentlemen have been connected with the establishment almost from its inception, and to their capable management of their respective departments Mr. Saunders attributes much of the success that has attended his efforts.

Mr. Saunders believes that this action will strengthen the position of the house in the eyes of the medical profession, as it will secure a permanence of organization that will ensure the perpetuation of the business. Besides this, it will obviate the disadvantages incident to a large business that rests entirely upon the shoulders of one person, by permanently attaching to the house those whose ability and experience have contributed in bringing the business to its present state of prosperity.

The Subscription and Publication Departments will be conducted as heretofore.

The Trade Book Department will be under the management of Mr. W. D. Watson, whose connection with the house has extended over the past eight years, and who has demonstrated his ability to manage that department with efficiency and success.

The Acute Stage of Endometritis.

In the May issue of the International Journal of Surgery, Prof. Ralph Waldo in speaking of the use of the Curette in Acute Condition of Endometritis says "that its use is not only not indicated, but in many instances would do positive harm during the acute stage of endometritis."

The congested and inflamed endometrium should be treated by local application which will exert a soothing yet stimulating and healing effect. Micajah's Medicated Uterine Wafers are especially indicated in endometritis, and diseases of the uterus and its appendages. As a remedy for the treatment of diseases of women they have stood the test of time, and are recommended and used by many leading men of the medical profession.

A Little Baby.

Mr. and Mrs. Adam Niedlein, of Franklin avenue, Guttenberg, N. J., are rejoicing moderately over a very small addition to their family, a girl weighing only one and a half pounds. Despite its size, it is well formed and perfectly healthy, so far as physicians who have looked at it can determine. Mrs. Niedlein is a small woman. Mr. Niedlein is six feet tall and weighs 284 pounds. The baby can lie comfortably in the palm of his hand.—*Medical Dial.*

J. L. Ridley, M. D., Huntsville, Ala., says: I have used S. H. Kennedy's Extract of Pinus Canadensis, both White and Dark. I can frequently cure gonorrhea without any other remedy. I use as an injection, and prescribe the Dark internally, where there is irritability about the mouth of the bladder. I have learned to regard it as a specific. In chronic cystitis I have derived great benefit from it, and in leucorrhea it relieves when many other remedies fail. It is a valuable remedy, and I have had marked success with it.

"Did you have a good passage?" was asked of a recent traveler. "Fair; but I couldn't sleep. The first three nights I couldn't tell whether to shut the porthole and go to bed, or to close the bed and go to the porthole. And the last three I spent in reading the custom laws."—*Life.*

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The word Listerine assures to the Medical Profession a non-poisonous antiseptic of well proven efficacy; uniform and definite in preparation, and having a wide field of usefulness.

On account of its absolute safety, Listerine is well adapted to internal use and to the treatment of Catarrhal Conditions of the mucous surfaces.

LITERATURE DESCRIBING THE BEST METHODS FOR USING

Listerine in the Treatment of Diseases of the Respiratory System

WILL BE MAILED TO YOUR ADDRESS, UPON APPLICATION.

We beg to announce that, in addition to the 14 oz. bottle, in which Listerine is offered to the trade, the pharmacist can now supply a smaller package, containing 3 fluid ounces, which is put up for the convenience of practitioners who prefer, upon certain occasions, to prescribe articles of established merit in the Original Package, under the seal and guarantee of the manufacturer.

FOR DISEASES OF THE URIC ACID DIATHESIS:

Lambert's Lithiated Hydrangea

RENAL ALTERATIVE--ANTILITHIC.

The ascertained value of Hydrangea in Calculous Complaints and Abnormal Conditions of the Kidneys, through the earlier reports of Drs. Atlee, Horsley, Monkur, Butler and others, and the well-known utility of Lithia in diseases of the uric acid diathesis, at once justified the therapeutic claims of LAMBERT'S LITHIATED HYDRANGEA when first announced to the medical profession, whilst subsequent use and close clinical observation has caused it to be regarded by physicians generally as a very valuable Kidney Alterative and Antilithic agent in the treatment of

Urinary Calculus, Gout, Rheumatism, Cystitis, Diabetes, Hematuria, Bright's Disease, Albuminuria, and Vesical Irritations Generally.

Realizing that in many of the diseases in which LAMBERT'S LITHIATED HYDRANGEA has been found to possess great therapeutic value, it is of the highest importance that suitable diet be employed, we have had prepared for the convenience of physicians,

DIETETIC NOTES.

suggesting the articles of food to be allowed or prohibited in several of these diseases. A book of these Dietetic Notes, each note perforated and convenient for the physician to detach and distribute to patients, supplied upon request, together with literature fully descriptive of LAMBERT'S LITHIATED HYDRANGEA.

LAMBERT PHARMACAL CO., ST. LOUIS.

Infantile Diarrhea.

By Wm. Duncan, L. F. P. S., Glasg., etc.

The death rate among children could be very materially reduced if those in charge of them would seek medical aid immediately on the first appearance of the diarrhea, but, unfortunately, it is the practice among the majority of people, especially the working classes, to pay little or no attention to the malady for a time, consoling their minds with the hope that the diarrhea will probably soon cease, or that it might be dangerous to stop it, or that it is due to teething, etc., thereby deceiving themselves until it is too late, when the true state of matters is brought painfully home to them, and at the "eleventh hour" medical assistance is procured, but, alas! in vain, and the poor little sufferer is relieved in death.

The dietary of children plays a most important part in the etiology of the complaint, and is frequently alone the real cause of the diarrhea, especially in those below six months old. The popular prejudice is in favor of feeding children as soon as possible on some (as we call it) solid or semi-solid food, and often, despite the remonstrances of the doctor, corn-flour, arrowroot, bread and milk, potatoes, etc., are given to very young children at a time when they are entirely unfitted to digest them.

It is well known that the salivary glands do not become fully developed before the sixth month of life, hence any starchy element of diet administered to an infant who has not reached that age is worse than useless. Until and unless mothers are educated on the rational dietary of their children, one of the great factors in the production of cholera-infantum must remain.

When a woman cannot suckle her baby, cow's milk is usually chosen as the substitute. Cow's milk is more liable than human milk to form those large, tough clots, which one frequently sees vomited and passed per anum in cases of the diarrhea of children. I had several instances of this lately, where I ordered ol. ticini, to be followed by lactopeptine in suitable doses at regular intervals, and I was pleased with the results, and in a few other cases the Lactopeptine treatment alone was used, and the little patients rapidly recovered. I am in the habit in most cases of directing the Lactopeptine to be continued for a time after all is well, but am disinclined to prolong a course of artificial digestion when I am satisfied they can be done without, as I think it wise to let nature have her way and do her own work unaided.

In artificial feeding all milk ought to be thoroughly and efficiently sterilized by boil-

ing, and more especially should this be attended to during an attack of diarrhea, and all feeding bottles, tubes, etc., should be kept scrupulously clean. If the motions are green, a dose or two of Hydrarg. c. Creta will do good, and vomiting may be controlled by Bismuth, the Carbonate being a good antacid preparation. Pulvis Cretae Aromaticus is serviceable for the diarrhea, or the Tincture of Catechu with Mistura Cretae. Some advocate the giving of opium, but I would be rather reluctant in administering this drug to very young children. Whatever treatment is adopted, I am of opinion that better results will be obtained if Lactopeptine is given in conjunction throughout the whole sickness, as the gastric and intestinal functions are so seriously impaired that digestion and assimilation are in most cases reduced to their lowest point: nutrition accordingly suffers, and the dangers of the case are consequently increased.

In cases of collapse brandy will be required, the dose being carefully regulated; thus a child three months old may get about ℥v with ℥xx, of tepid water, every two or three hours, or more or less frequently, as the case may demand, one six months ℥x-℥xv, diluted with about 3ss of warm water, and from ℥xx-℥xxx may be given to a yearling, mixed with about a teaspoonful of water, but sometimes in cases of Cholera Infantum absorption from the stomach is at a standstill, and other means must be taken to ensure the entrance of the cardiac stimulant into the circulation. Hypodermic injection is the most certain and rapid in action, and is to be recommended for children a few years old, rectal injections being employed in the case of very young children. Any stimulant thrown into the rectum should be so diluted as to reduce its local irritant qualities as much as possible, and not to be too bulky, otherwise it will not remain. Ether may be given subcutaneously and brandy per rectum.

During convalescence it is advisable to assist the gastric and intestinal functions until they are so far recovered as to be able to perform their own work. I have already remarked that when those functions have been restored to their normal, healthy standard, all aid should be suspended, and nature allowed to do her own work, but as long as digestion remains feeble we must help it in some way or other, so as to give the organs time to recuperate, and this end will be best accomplished by rest to the digestive tract, which can be obtained by the inhibition of such reliable artificial digestive as above described.

STANDARD PREPARATIONS

Made for and Highly Endorsed by Medical Men Everywhere.

Unguentum Resinol.*Antipruritic, Antiphlogistic,**Nutrient and Plerotic***Elixir Cascanata.***Alterative, Laxative,**Antacid and Secernent.***Resinol Soap.***Prophylactic,**Germicidal, Etc.*

"Resinol is the best remedy I have ever used in Pruritus Ani.

GEO. H. SMITH, M. D., Brooklyn, N. Y."

I have requested our druggists to carry UNGUENTUM RESINOL and RESINOL SOAP. They are all right.—

A. E. EARLY, M. D., Kingman, Arizona.

RESINOL has given me entire satisfaction. Its wide range of usefulness especially recommends it.—

LOUIS A. BOOKING, M. D., Louisville, Ky.

Am prescribing UNGUENTUM RESINOL with great satisfaction.—J. S. BEAUDRY, M. D., Chicago, Ill.

Have used RESINOL in many cases and am exceedingly pleased with its action.—G. E. WILDER, M. D., Sandusky, Ohio.

I cannot find anything that can take the place of RESINOL.—A. AGEE, M. D., Holbrook, Ky.

I have found RESINOL to be a remarkable cure for almost any type of Sore.—G. D. BOUDOUSQUIE, M. D., Tuscaloosa, Ala.

I have prescribed RESINOL in many cases and am very much pleased with it.—SAM'L G. SEWALL, M. D., 1 E. 121st St., New York.

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Sanmetto in Enuresis-Nocturna.

Dr. L. L. Gray, St. John, Mo., reports the outlines of a case of enuresis-nocturna, treated with sanmetto, several years ago. The case was that of a maid thirteen years of age, who had suffered with enuresis from infancy. She was old enough to realize her condition, and keenly felt its effects, acted as though she thought every one she met knew her troubles, and consequently she was shy, unsociable, ashamed to be seen in company, and strangers would ask if she was entirely sane. He gave her a bottle of sanmetto, told her mother to give her all assurance that it would cure her, if properly taken. A second four-ounce prescription verified the truth of his statement. He says it did cure her for all time, and to-day she is a perfectly formed young lady, intelligent and sociable, the downcast countenance gone, and life is again worth living.

The following clipping from a recent issue of the Gallipolis (Ohio) Tribune was kindly sent to the Cleveland Journal of Medicine by Mr. Boyd Thomas, special representative of the Mellin's Food Company, who is well known to the physicians of this State, and seemed quite worthy of reproduction:

"Not only those doctors who subscribe and pay for The Daily Tribune, but also those who read it regularly at somebody else's expense, will testify to the interest taken in the medical profession, no matter whether its exponents devote themselves to curing the ills that flesh is heir to, or rush about town attempting to chloroform the body politic. We do not deny a tender solicitude for all doctors, good, bad and indifferent. When they have their little spats over matters medical or political, The Tribune is always on hand with lint for their wounds and salve for their sores. We keep in stock garlands for their modesty, antidotes for their venom, praise for their virtues, and forgiveness for their assaults upon us when they become blind to the rays of truth that spring from our columns. If, as Pope says, 'The proper study of mankind is man,' then newspapers are justified in watching the doctors. This is particularly the case in view of the well-known antipathy many doctors have for advertising—when it must be paid for. We have found a doctor who advertises like a house afire. His name is Soper—A. Soper, and last Friday he had a solid page of advertising in the Pittsburg Dispatch—eighteen columns devoted to the deeds of Soper, M.D.

"Dr. Soper says he was consulted by 6,876 patients in 1899—nearly 30 a day—of

whom 3,334 were cured and only 7 died. Think of that! Dr. Soper declares that he cured 84 epileptic patients—more than have been discharged cured from our Epileptic Hospital in all its existence, and modestly acknowledges that he has 104 diplomas. Although "very wealthy," he "bears his distinction with affable and becoming dignity," says his advertisement. We should smile. In all our experience with doctors we have never "seen the beat" of A. Soper, M.D. He is a medicinal looloo, a fragrant flower blooming on the outside wall of the code. His picture adorns his advertisement, and beats Munyon's for statuesque beauty. We think Pittsburg should have a statue of A. Soper, M.D. A man who can keep the death rate of nearly 10,000 patients down to 7 in an entire year—less than will occur among any group of 10,000 perfectly healthy men, is a marvel, and can say with the Latin poet, "*Exegi monumentum aere perennius.*"

"But instead of erecting a monument more lasting than brass, we think Dr. Soper's Monument should be made entire of brass."

"Five sparks now grow, where one spark grew before," is a line from R. V. Wagner & Co.'s new booklet, by which they mean that their static machine is five times more powerful than any other static machine of the same size and number of plates. Their little book is full of startling statements and epigrammatic facts and if you are interested in X-Ray work it will pay you to send for it. Among their claims is that the best X-Ray is produced by a current of a high vibratory nature which can only be obtained from a machine running at a high rate of speed. In other words, the same volume of current produced by a machine running slowly would not give as good X-Ray work as by a machine running at a very high rate of speed. Mica Plate Static Machines are the only machines now made which can be run upwards of 300 or 400 revolutions per minute, &c., &c.

Dr. George, of Indianapolis, tells the following: "My experience with suggestion reminds me of a friend of mine in Indianapolis who went to Porto Rica. On board the ship a great many were sick, and one of the boys, a young Irishman, was sitting with his arm on the rail, with every indication of seasickness. My friend thought he would console him, and he went up to him and said: 'Comrade, you have a weak stomach.' 'A weak stomach? Oh, I don't know. I'm throwing about as far as any of 'em.'"—*Medical Standard.*

47 Wil'son St., Finsbury Square, E. C.
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Many patients suffering from shock, as in some cases of strangulated hernia, appendicitis, etc., often presents a peculiar state of mind, in which they show a queer combination of fear with a strangely boastful and assertive spirit, being apt to assert that they are feeling very well. It is well not to be deceived by such a state of affairs, which most commonly reveals a condition attended with no little danger.—*International Journal of Surgery.*

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Dr. Hugh M. Taylor, of Richmond, Va., said his experience sustains the advantages claimed for the angiotribe. In selected cases he thought it was a safe substitute for forceps and ligature. It was very easy to apply and this should commend it to those who have not served a long apprenticeship in the use of the ligature.

He was impressed by the commonly observed fact that post-operative shock was markedly diminished in the cases in which he had used the angiotribe, and he thinks this is equally true as to the intensity and duration of post-operative pain. Convalescence seemed to be established at an earlier date and to progress more rapidly.

In only one instance did he fail to secure complete hemostasis by means of the angiotribe. This occurred in resecting a section of badly infected omentum which had wrapped up a necrotic appendix.

In all he had used the angiotribe in fifteen cases, all of which were supra-pubic sections. He had not used it when operating by the vaginal route. This was largely due to the fact that he had had but a limited experience in working through the vagina. The encouraging reports from so many, he thought, warranted the conclusion that the angiotribe would find a large field of usefulness through the vaginal route.

A majority of his cases were very simple in character, about one-half were uncomplicated hysterectomies, while the others were types of cystomas. In only one instance were there post-operative symptoms which suggested the occurrence of hemorrhage. This case was a large unilocular ovarian cystoma with extensive bowel adhesions.

He had had no opportunity to use the angiotribe in septic cases, but it seemed desirable to avoid the use of the ligature in existing or threatened septic conditions.

Many bad cases of head injury appear to end fatally, owing to failure of the respiratory centres. In these cases the proper treatment consists in the persistent use of artificial respiration, with alternate heat and cold to the chest and abdomen. These measures may tide the patient over a dangerous period and bring about an ultimate recovery.—*International Jour. of Surgery.*

*Abstract of the paper read before the Atlantic City meeting of the American Medical Association, Jan. 5, 1900.



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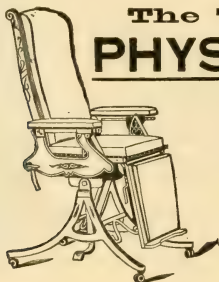
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Latin Diplomas Forbidden in Germany.

It is reported from Berlin that Emperor William has empowered the Prussian Minister of Education, Dr. Studt, to forbid hereafter the use of Latin in all university and faculty degrees, assigning as a reason the importance of a "more general use of the German tongue." An order to this effect has just been issued.—*Medical Record.*

Modesty is a characteristic of physicians as a class, just as it is of all the truly great. Recent literature has shown one or two lapses. An Australian physician, for example, has described what he thinks to be a new

affection, and has named it after himself in large type, instead of waiting for others to pay him the compliment.—*Medical Record.*

Old Specula.

The Bulletin d'Oculistique relates a story answering the query, "What becomes of the old speculum?" A physician happening to enter the kitchen in a country hotel saw a brightly polished bivalve hanging among the cooking utensils, and upon inquiry learned that it was used by the cook for moulding sausages. The proprietor had bought it at an auction of second-hand household effects.—*Medical Record.*

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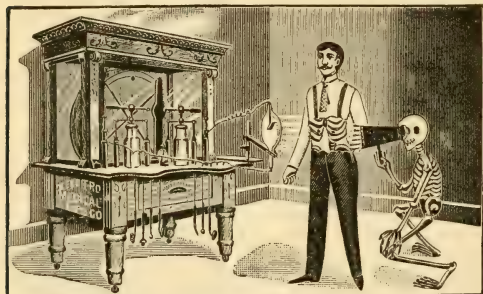
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That are of Intrinsic Value to the Medical Profession.

Extract from a paper read before the Atlanta Society of Medicine, April 26, 1887, by JOHN S. TODD, M. D., Professor Materia Medica and Therapeutics, Atlanta Medical College, Ga.; Ex-President of Georgia Medical Association; not read in our interest, but in the interest of Science and his profession:

"Some four and a half years since I had, among other cases, one of dysentery, which resisting all medication, became chronic, and a LARGE ULCER OF THE RECTUM DEVELOPED. I called in consultation a noted surgeon. The patient's condition was one of extreme emaciation; blood and mucus in large quantities were voided about an average of once an hour. The dose of opium had been increased to 3 dr. laudanum in twenty-four hours and $\frac{1}{2}$ gr. morphine twice a day, and still matters grew worse. We decided to inject solution 30 grs. to oz. nit. silver in rectum. The result was a COLLAPSE that nearly proved FATAL. Upon it being suggested later that the operation be repeated, the patient, a young man, said if we and his family insisted, to avoid it HE WOULD COMMIT SUICIDE. Dr. W. S. Armstrong was then called in with me. He suggested an exclusively milk diet, gradual reduction of opium, and ROCKBRIDGE (VA.) IRON AND ALUM WATER. Immediate improvement set in, and in TEN DAYS so great was THE CONSTIPATION that oil and enemas had to be resorted to to procure an evacuation from the bowels. Since that time I HAVE TREATED SEVERAL CASES EQUALLY AS BAD, WITH SAME HAPPY RESULT, using same diet and medicines, for of all agents for this disease, I consider THE ROCKBRIDGE ALUM AND IRON WATER THE FIRST. It is equally EFFICACIOUS in CHRONIC DIARRHŒA, AS MY RECORDS ATTEST."

DR. TODD, March 21, 1900, writes: I have for 16 years used these GRAND WATERS constantly in my practice with increased and increasing satisfaction, I inclose you article written 3 years ago on opium. "In chronic diarrhœa and dysentery, the milk diet, ROCKBRIDGE ALUM WATER, and small doses of opium given cautiously—very cautiously lest your patient acquire the opium habit—has proved so INVARIABLY SUCCESSFUL with me, that I have COME TO TREAT THESE CASES with a CONFIDENCE BORN OF SUCCESS."

DR. HUNTER MCGUIRE, Virginia's great surgeon, says: As an astringent and tonic it is one of the most valuable I have ever used.

DR. S. GAILLARD THOMAS, Professor College of Physicians and Surgeons, N. C.: Most efficient astringent and tonic waters I have ever employed.

Write JAMES A. FRAZIER, Mgr. Receiver, Rockbridge Alum Springs, for Pamphlet.

Medical Aphorisms.

Be awake, expect the unexpected and don't get "rattled" if it happens.

Don't dawdle. Don't "putter." Don't temporize, Don't halt too long between two opinions. It is far better to decide wrongly now and then than never decide at all. Think clearly, act promptly, speak positively.

Don't gossip. Don't linger. Do your work thoroughly and go. Short-comings can never be atoned for by long-comings.

Lives of great men all remind us that we are shamefully lazy.

Success in acquiring and holding practice is far less a matter of therapeutics than of tact.

The words of a physician who weighs 150 pounds have just 60 per cent. as much weight as the words of a physician who weighs 250 pounds—other things being equal.

Every doctor should have: A good wife a good microscope, a good digestion, a clear conscience, an active brain, a steady hand and a thick skin.

Don't get too elated because a patient highly compliments your skill. The collection of that patient's bill will be slow, dif-

ficult, or impossible. Compliments gratify but dollars satisfy.

Be human, be sympathetic; but if God didn't make you that way to begin with or if you have spoiled His workmanship, get out of the practice of medicine at once.

Be tolerant of, and respectful to, all forms of religion as represented in the families of your patients. Any religion that can calm and cheer the dying or comfort and console the living is worthy of respectful treatment.

Don't quarrel, but don't allow people to run over you. Puncture the medical windbag who comes to you to boast of his enormous practice or marvelous results—if you can.

Don't worry, don't envy. Work hard, live economically, die early and poor, and may God have mercy on your soul. I believe He will.—*Rose in Alkaloidal Clinic.*

Doctor—Your husband's case is a serious one, Mrs. Moriarity. I'm afraid there is a foreign substance in his œsophagus.

Mrs. Moriarity—Furrin, is it? Bedad, an' Oi'm not surprised, sorr; for many's the toime Oi've warned him ag'inst atin thim Dutch sausages that he's so fond of.—*Ex.*

Mechanical Treatment of Sciatica.

Fretin (*Journal de Medecine de Paris*, No. 2, 1900) advises as an efficient treatment for sciatica, friction, massage, and vibrations of the nerve trunk; massage and vibration of all the muscles of the leg and thigh; passive extension of the sciatic nerve; and gymnastic movements of the lower extremity of the trunk.

Various manipulations are described in details, and, according to the illustrations, imply a degree of strength on the part of the rubber and a passive endurance on the part of the patient which is rarely encountered in the Anglo-Saxon race.

Treatment should be repeated daily, and should be continued days, weeks, or even months. It is said to give better results than any other method.—*Therapeutic Gazette*.

M. F. Allard, of Paris, reports good results from the use of galvanism in simple chronic glaucoma. He relies on the sedative action of the positive pole, and applies it over the cervical sympathetic along the length of its course in the neck. A current of from 15 to 20 ma. is used. In two cases, in which vision was irremediably lost, the violent and uncontrollable peri-orbital pains were calmed after a few sances. In three cases vision was improved in two months' treatment; in another, the glaucomatous atrophy, which progressed very rapidly before electrization, was arrested. Two cases, treated early, have been practically cured, since visual acuity and the visual field have become normal after fifteen to twenty sances.—*Electro-Therapeutics*.

That consumption does not run in families, but does run in houses, is the theory of Sir Richard Thorne, who addressed the London Medical Society recently. "Refuse to live on a damp soil," was his advice; until people ceased to live under unfavorable conditions, they need hope for little diminution in the consumption death rate. The improvement of sanitary appliances had in the last forty-five years reduced that rate nearly 50 per cent.—*Medicus*.

The recently graduated French M. D. is the Reverend Dr. Migot, pastor of a large Protestant parish in the Faubourg Saint-Antoine, Paris. He replied to the question whether he was going to give up the cure of souls for the cure of the body, that there is no antagonism between them, and that he intends to practice both.—*Milwaukee Medical Journal*.

The Plague in South Africa.

According to a report from Durban dated May 24th, a case of bubonic plague is announced officially from Durban. The most stringent measures have been put in force and every effort is being made to prevent an epidemic among the troops. Later reports state that no new development has occurred, but that precautions have been in no degree relaxed.—*N. Y. Med. Journal*.

Subhyoid Pharyngotomy.

Honsell (*Centralblatt fur Chirurgie*, No. 11, 1900), quotes Langenbeck to the effect that this operation is advisable for the removal of foreign bodies and new growths placed in or about the pharynx and larynx, and for the extirpation of infiltrations of the epiglottis and vocal cords. Of ninety-three cases, twenty-five per cent. perished. In many of these the operation had been performed for the relief of malignant growth.—*Therapeutic Gazette*.

We are pleased to note that the St. Paul Daily News refuses to accept any advertisements dealing in disgusting details referring to venereal diseases or diseases of the sexual organs. A crusade has also been started against the numerous medical institutes which advertise: "No Cure, No Pay," and which fail to return the money to the uncured. The Cincinnati Post has also eliminated all the fake and immoral advertisements of an alleged medical nature. We hope that this is but the beginning of a wide spread reform along this line.—*Interstate Med. Journal*.

Leduc, of Naples, has found that a point connected with one of the poles of a static machine, the other isolated, produces certain rays that have photographic action. The negative pole is the most marked in its action, and by means of its clear silhouettes can be obtained on a photographic plate. He suggests that these rays might be utilized in the treatment of dermatosis in place of the chemical rays so successfully used by Finsen of Copenhagen.—*Electro-Therapeutics*.

Cocaine in operations upon the lower extremities may be used as a partial anesthetic by injecting one-half cgm. into the lumbar subarachnoid space. Quinche, Scharf, Bier, Seldowitsch, and Tuffier have employed the method. Tuffier has operated with success in ankylosis of the knee, pelvic suppuration, and vaginal hysterectomy.—*Medical Record*.

